

A303 Amesbury to Berwick Down

TR010025

Deadline 7

**8.44 - Comments on any further information requested by
the ExA and received at Deadline 5 and 6**

APFP Regulation 5(2)(q)

Planning Act 2008

The Infrastructure Planning (Examination Procedure) Rules 2010

August 2019



Infrastructure Planning

Planning Act 2008

The Infrastructure Planning (Examination Procedure)

Rules 2010

A303 Amesbury to Berwick Down

Development Consent Order 20[**]

**Comments on any further information requested by the ExA
and received at Deadline 5 and 6**

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Table of Contents

1	Introduction.....	3
1.1	Purpose of Report.....	3
1.2	Structure of this document	3
1.3	The Examination Library	4
2	Ruth Manvell (AS-055).....	5
3	Wiltshire Council (REP5-005 to REP5-009 and REP6-041).....	8
4	National Trust (REP5-019 and REP6-062).....	38
5	M & R Hosier (REP5-014, REP5-015 and REP5-033)	44
6	Stonehenge Alliance (REP5-021 to REP5-024 and REP6-063 to REP6-065).....	62
7	Jon Morris (REP5-030)	121
8	National Farmers Union (REP5-017 and REP6-059)	128
9	Stephen Moore (REP5-029 and REP6-075 and REP6-076)	136
10	Royal Society for the Protection of Birds (REP5-020 and REP6-070)	141
11	Berwick Down Ltd & Biddesden House Farm Partnership (REP5-010)	143
12	English Heritage Trust (REP5-012 and REP6-045).....	146
13	Historic England (Historic Buildings and Monuments Commission for England) (REP5-013 and REP6-053)	153
14	Mr R Parsons (REP5-031)	164
15	Barry Garwood (REP5-028).....	166
16	PJ Rowland & Sons and Mr C A Rowland (REP5-032, REP6-069 and REP6-078)	169
17	Classmaxi Ltd (REP5-011)	172
18	West Amesbury Farm and Mrs P M Sandell (REP5-027, REP6-079).....	175
19	Morrison and King Ltd (REP5-016 and REP6-083).....	179
20	Beacon Hill Ltd (REP5-016)	184
21	Mrs Kathleen Edna Crook (REP5-016)	185
22	Travelodge Hotels Ltd (REP5-026 and REP6-066)	190
23	Ministry of Defence (REP6-057).....	198
24	Natural England (REP6-062)	199
25	The Turner Family (REP6-067).....	201
26	Winterbourne Stoke Parish Council (REP6-071).....	205
27	Environment Agency (REP6-046, REP6-047, REP6-048).....	208
28	Esso Petroleum (REP6-049)	231

29	Friends of the Earth (REP6-050)	232
30	Grove Property (REP6-052)	235
31	ICOMOS-UK (REP6-054 and REP6-055)	238
32	King Arthur Pendragon (REP6-077)	269
33	Lincoln College (REP6-056)	270
34	Max and Helen Hosier (REP6-072)	273
35	Mr F W G Whiting (REP6-081)	275
36	Mrs J Sebborn and Mr R Sebborn (REP6-080)	276
37	Rollo Maughfling (REP6-074)	277
38	Suzanne Keene (REP6-073)	280
39	Lois Lloyd (REP6-082)	283
40	The Blick Mead Project Team (REP6-044)	293

1 Introduction

1.1 Purpose of Report

- 1.1.1 This report provides Highways England's responses to representations by Interested Parties (IPs) submitted at deadline 5 and at deadline 6.

1.2 Structure of this document

- 1.2.1 This report is structured by Interested Party. It presents matters they have raised from their representations and the associated responses from Highways England. The Table of Contents provides the complete listing of the representations received and included in this report.
- 1.2.2 The matters raised and responded to in this report are from:
- Comments on the oral written submissions from ISHs made by the Applicant at Deadline 4 [REP4-029 to REP4-035];
 - Comments on the Applicant's Comments on information received at Deadline 3, submitted at Deadline 4 [REP4-036];
 - Comments on the Land Acquisition and Temporary Possession Negotiations Schedule [REP5-008];
 - Responses by IPs to Second Round of Examining Authority's Written Questions [PD-014] submitted at deadline 6;
 - Comments on the draft DAMS [REP4-024]
 - Written confirmation of oral statements made at the Compulsory Acquisition Hearings; and
 - Additional submissions.
- 1.2.3 Comments received at Deadline 5 on the revised OEMP [REP3-006], comments on the revised dDCO [REP3-002] and comments from Wiltshire Council and Trail Riders Fellowship regarding Deadline 4a submissions were responded to in separate reports, submitted at deadline 6; REP6-034, REP6-035 and REP6-037 respectively.
- 1.2.4 Late deadline 6 submissions of comments published on the Planning Inspectorate's website on and after 5 August 2019 will be addressed at Deadline 8.

1.3 The Examination Library

- 1.3.1 References set out in square brackets (e.g. [APP-010]) are to documents catalogued in the Examination Library. The Examination Library can be viewed at the following link:

<https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010025/TR010025-000484-Stonehenge%20-%20Examination%20Library%20Template.pdf>

- 1.3.2 The Examination Library will be updated at regular intervals as the Examination progresses.

2 Ruth Manvell (AS-055)

2.1	Additional Submission	
	Matter Raised	Highways England's Response
2.1.1	Where, how and when was a survey of bustards done in the area? 40.3.25 A map was sent to the ecologist 2 years ago which clearly marks the areas where bustards have been seen on a regular basis and have nested. Updated map on request (NOT FOR PUBLIC INFORMATION)	<p>Breeding bird surveys were undertaken in 2017 to inform the three options that were to be taken forward at the time (Options 1Na, 1Sa and 1Nd), the survey area of which included the current route option [APP-255]. The surveys broadly followed the Common Bird Census (CBC) (Environmental Statement Table 8.8 [APP-046]) and consisted of a total of seven walked transects that were visited four times between April and July 2017. There were no specific surveys for great bustard.</p> <p>The data provided by the Great Bustard Group on great bustard nesting locations [APP-157] and the breeding bird surveys undertaken to inform the Scheme [APP-255] were considered suitable to determine the baseline and the impact of the Scheme (paragraphs 8.9.141-144 and 8.9.223-224 the Environmental Statement) [APP-046].</p>
2.1.2	For transparency why was GBG not asked to accompany the surveillance group.	The methods of the breeding bird survey followed current best practice and were agreed with both the RSPB and Natural England prior to commencing the survey, as stated in Table 8.5 of Chapter 8 of the Environmental Statement [APP-046].
2.1.3	Birds are around the Western portal area more than the Eastern portal area – Manor Farm, Druids Estate, Yarnbury. 40.3.21	The Environmental Statement was based on the information provided by the Great Bustard Group at the time of writing and was considered suitable to inform the assessment paragraphs 8.9.141-8.9.144 [APP-046]. Highways England welcomes the information regarding great bustard activity within proximity of the Scheme. Monitoring and reporting arrangements in respect of the measures relating to Great Bustard in the OEMP will be developed in consultation with the Great Bustard Group as stated within PW-BIO5 and MW-BIO8 of the OEMP [REP6-011].

2.1.4	<p>Birds habitat is not predominantly grassland, for much of the year they frequent arable areas.</p> <p>40.3.24</p>	<p>Agreed, as stated within paragraph 8.9.143 of Chapter 8 of the Environmental Statement [APP-046] and response to agenda item 18.2.29 in the Comments on any Further Information at deadline 4 [REP5-003], both open grassland and arable land is suitable for great bustard. Status and habitat of great bustard were also summarised in Response to the Examining Authority's Written Questions Ec.1.22 [REP2-027], where the importance of arable land for great bustard was stated.</p>
2.1.5	<p>At what distance is near 40.3.23 and who has advised this distance for Great Bustards?</p>	<p>Please see response to Agenda item 18.2.28 in the Comments on any Further Information at deadline 4 [REP5-003].</p> <p>The disturbance distance for great bustard has not been as well studied as that of stone curlew. Based on conversations with Mrs Manvell and RSPB, it is considered that the distance of 500m incorporated into the OEMP [REP6-011] for stone curlew (PW-BIO5 and MW-BIO8) would be suitable for great bustard as well as for stone curlew. Further consultation will be undertaken with the Great Bustard Group should this species be found nesting within 500m of the working area.</p>
2.1.6	<p>Disappointed that GBG have not been contacted directly until now. It has been through information and invitation from Landowners and from individuals in other groups that GBG has heard of meetings etc. I put in representation both on a personal and for the GBG after both consultation meetings but still had to rely on word of mouth of group meetings.</p>	<p>Please see response to Agenda item 18.2.27 in the Comments on any Further Information at deadline 4 [REP5-003].</p> <p>As stated within the OEMP [REP6-011], further consultation will be undertaken with the Great Bustard Group to aid in the avoidance of disturbance impacts on nesting great bustard.</p>
2.1.7	<p>I have attended forums in Amesbury which seems only to deal with Legacy and Benefits. I tried to get information by asking the forums and the telephone number at the back of the booklets to supply information and was told it wasn't available by the forum and no response from the contact number in the booklet</p>	<p>The Applicant regrets any difficulties encountered by the Great Bustard Group in accessing information about the Scheme.</p> <p>Please email A303Stonehenge@highwaysengland.co.uk with any questions you may have and your contact details and the team will be happy to assist. In addition, the digital Environmental Statement, which you can access via the link below may help you navigate the information on the Scheme.</p> <p>https://highwaysengland.co.uk/a303-stonehenge-library/.</p>

Alternatively, the Applicant's documentation submitted as part of its application, and throughout the Examination process, can be accessed on PINS' examination library:
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https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010025/TR010025-000484-Stonehenge%20-%20Examination%20Library%20Template.pdf

3 Wiltshire Council (REP5-005 to REP5-009 and REP6-041)

3.1	Oral Submission		
The Applicant's written oral submissions for the Compulsory Acquisition Hearing [REP5-002] respond to Wiltshire Council's comments received at deadline 5.			
3.2	Comments on Revision 2 of the Land Acquisition and Temporary Possession Negotiations Schedule [REP4-027]		
	Matter Raised		Highways England's Response
3.2.1	<div>1.1 Wiltshire Council wishes to highlight the following inaccuracies in section 33 detailing the contact between Highways England (HE) and the Council. These comments are limited to those contact elements directly associated with land discussions.</div> <div>1.2 According to Council records, the Land Ownership Meeting stated to be held on 1st February 2019 was actually held on 28th January 2019. The "Email – Notes and actions from meeting – 01/02/2019" should be amended so that it is clear that this item relates to the Land Ownership Meeting held on 28th January 2019.</div> <div>1.3 On 15th February 2019, Wiltshire Council received an email and electronic folder link with an updated version of the Book of Reference and associated Land Plans from HE, within which HE themselves identified a number of inconsistencies which would be rectified in the next version of the Book of Reference. The Council's response to this email and electronic folder was sent on 22nd February 2019. The</div>	<div>Wiltshire Council's comments on the Negotiations Schedule have been reviewed and the suggested amends have been incorporated into the updated Negotiations Schedule, which was submitted at deadline 6 [REP6-017].</div>	

	<p>Council received a reply to its email from HE on 4th March 2019.</p> <p>1.4 The 15th February email referenced in 2.3 above, indicated that an updated Book of Reference would be submitted into Examination in May 2019. The Council submitted its comments on this updated Book of Reference on 31st May 2019 at Deadline 3.</p> <p>1.5 As an aside and whilst not directly related to land discussions, the Council believes that the “Email – Statement of Conversation Report (SOCR) – 18/03/2019” should be amended to “State of Conservation Report”. This was an error in the subject of the email, however it referred to the State of Conservation Report written by DCMS.</p> <p>The Land Acquisition and Temporary Possession Negotiations Schedule should be updated to reflect the points above.</p>	
3.3	Comments on Revision 1 of the Draft Detailed Archaeological Mitigation Strategy [REP4-025]	
	Matter Raised	Highways England’s Response
3.3.1	<p><u>Deposition of Tunnel Arisings at Parsonage Down East</u></p> <p>The Scheme proposes to deposit the arisings from the tunnel boring within this section of the landscape outside the WHS and creation of a chalk grassland habitat. The archaeological mitigation proposed for this area is a combination of excavation and preservation in situ of known archaeological remains.</p> <p>The method to be used to manufacture and distribute the chalk slurry to be deposited on Parsonage Down East has been discussed with Highways England (HE) over the last few weeks. Some of the details of the method are still unclear as are the</p>	<p>See Highways England’s Response to Agenda item 7 (ii) in the Written summaries of oral submissions put at ISH2 regarding Cultural Heritage [REP4-030] which explains that the processing of chalk will be undertaken using a materials separation system based on sieving, centrifuging and final pressing of the remaining fine material to provide a chalk ‘cake’. In terms of the detailed methodology involved in the manufacturing and distributing the chalk slurry this would be dependent on the type of tunnelling machine selected and the contractors’ methods for the transportation of material.</p> <p>The deadline 6 submission of the draft DAMS [REP6-013] includes additional information on the proposals for preservation of archaeological sites beneath landscape fill and in excavated material deposition areas, in accordance with Historic England guidance, at paragraphs 5.2.9 to 5.2.14 [REP6-013, pages</p>

	<p>implications for any preservation of archaeological remains that will be buried. The Council has requested further information to help inform the decision-making process, including further analysis and assessment of the archaeological remains in the area for proposed deposition of tunnel arisings. The Council would like to see an assessment that pulls together all the findings from the different phases of work, both non-intrusive and the trenching, to address the nature, condition and chronology of the remains. This will help the Council to have a clearer indication of the significance of the remains in relation to the wider landscape context and allow the development of research questions to be focused on during the mitigation phase.</p> <p>Furthermore, HE will need to demonstrate that preservation in situ of archaeological remains can be fully achieved in line with Historic England's relevant guidelines.</p> <p>Until the additional information has been received and assessed, the strategy for the preservation in situ or full excavation of archaeological features prior to deposition of tunnel arisings on Parsonage Down East cannot be confirmed and approved.</p> <p>It is likely that the Council will require further field evaluation (trenching and geophysical survey) and/ or mitigation than currently proposed.</p>	<p>61 to 62]. The mitigation proposals for sites within Parsonage Down East are described in Appendix D of the draft DAMS.</p> <p>A document that draws together all the findings from the different phases of work and clarifies the archaeological mitigation proposals at Parsonage Down East has been prepared to address the Council's comments and a draft has been provided to the Council for discussion. This clarifies further the methods to be used for preservation <i>in situ</i> at Parsonage Down East. The document confirms the assessment of the significance as set out in the ES of the archaeological remains at Parsonage Down East. The document also clarifies the research framework for the archaeological mitigation works for Parsonage Down East, as secured by the DAMS [REP6-013].</p> <p>The dDAMS as issued at deadline 6 [REP6-013] includes mechanisms to ensure that appropriate decisions can be made during the detailed design phase with regards to the preservation in situ of archaeological remains or their archaeological excavation in advance of the laying of fill materials at Parsonage Down East.</p> <p>A meeting to discuss these aspects was held with Wiltshire Council and Historic England on the 1 August 2019.</p> <p>The dDAMS [REP6-013] has been updated following the meeting for submission to the Examining Authority at deadline 7.</p>
3.3.2	<p><u>Mitigation of Main Road Line Outside the WHS</u></p> <p>The Council acknowledges that further mitigation areas have been included in this revised version of the DAMS. However, this is still not extensive enough. This is a rich archaeological landscape and with the evaluation sample level of 5% applied, the Council would expect many smaller discreet archaeological sites such as pits, postholes and burials which lie outside the currently proposed mitigation areas. In consideration of this important prehistoric landscape, the Council</p>	<p>Highways England have updated the archaeological mitigation areas within the deadline 6 submission of the draft DAMS [REP6-013] including updated mitigation areas and proposals for the sections of the scheme outside the WHS. These updated proposals consider the main line, junctions and slip roads as shown on Figure 12 and described in section 5.2, table 11-3 and Appendix D. Preservation in situ is included at paragraph 5.2.5.</p>

	requires the whole of the road line outside of the World Heritage Site (WHS) (including junctions and slip roads) to be subject to some form of mitigation and this needs to be reflected in Appendix D, fieldwork action areas and Sections 5.3.4-5. The mitigation measures outlined in 5.2.5 need to include preservation in situ.	
3.3.3	<p><u>Archaeological Research Strategy</u></p> <p>The Council notes that Section 3.1 principally refers to the Stonehenge and Avebury Archaeological Research Framework (2016) and the Council advise that there are others, including specialist research frameworks that should also be included and referred to here. For the Roman period, these need to be considered.</p> <p>The Council notes there are no research questions relating to the Wessex Linears (Section 3.5) and an opportunity could be taken here to target parts of these features where dating evidence can be retrieved.</p> <p>Sections 3.6 and 3.7 only have a small number of research questions for the Iron Age, Roman and Medieval periods. The Council would like to see these enhanced, as there is more archaeological potential than currently included, particularly for areas outside the WHS. Improving the understanding of the relationship between field systems and settlements in these periods could be a priority. Research questions aimed at improving understanding of the flood plain deposits of the River Avon to the east of the WHS would also be useful (Section 4.3).</p>	Highways England acknowledges Wiltshire Council's comments regarding the need to refer to other specialist frameworks in the dDAMS. The DL6 submission of the dDAMS [REP6-013] includes an updated archaeological research agenda at section 4. Where the updated research agenda needs further refinement for the Iron Age, Roman and Medieval periods, including for instance the relationships between field systems and settlements in these periods, this has been updated in the dDAMS for submission at deadline 7.
3.3.4	<p><u>Top Soil Sampling Approach</u></p> <p>A robust methodology still needs to be agreed for further assessment and mitigation of artefacts in the topsoil in areas to be mitigated. Further information on the nature and extent of lithics</p>	Highways England have updated the deadline 6 submission of the dDAMS [REP6-013] including updated proposals for ploughzone artefact collection at paragraphs 6.3.11 to 6.3.18 (pages 82 to 83), following discussions with HMAG, including the mechanism for robust decision making. The artefact recovery strategy has been updated to include <i>in situ</i> lithic scatters at paragraph 6.3.30 (page 85).

	<p>from the evaluation phase has been requested from Highways England to help inform the decision making on this issue.</p> <p>In addition, the DAMS needs to include a strategy for the mitigation of any in situ lithic scatters that may be found during mitigation.</p>	
3.3.5	<p><u>Sampling Approach to Excavation of Features</u></p> <p>The level of sampling of features referred to in Sections 6.3.31 to 6.3.44 needs to be agreed and approved. A minimum percentage of sampling for all likely feature types should be set out in the DAMS. In addition, a strategy for the sampling of any prehistoric roundhouses needs to be included within this section.</p>	Highways England acknowledges Wiltshire Council's comment. The dDAMS has been updated in consultation with HMAG for submission at deadline 7 including a sampling strategy for prehistoric roundhouses [para. 6.3.47]. An excavation sampling strategy, including minimum percentages for archaeological features to be sampled is as set out in paras. 6.3.36 – 6.3.52 in the dDAMS submitted at deadline 7.
3.3.6	<p><u>Principles for Archaeological Mitigation (Section 2.3)</u></p> <p>The Council advises that this section should require all field staff involved in the mitigation to undertake a Scheme specific training programme. This could include an induction to the specific sampling requirements.</p> <p>In addition, it would be advisable to edit the principle set out in the 9th bullet point to “avoid and minimise harm to the integrity and authenticity of the WHS and the assets that contribute to the Outstanding Universal Value (OUV) of the WHS.”</p>	Highways England have updated the Principles for Archaeological Mitigation in the deadline 6 submission of the dDAMS [REP6-013]. A requirement for all field staff to undertake a Scheme-specific training programme is included at paragraph 2.3.1 (page 12). The tenth bullet point (previously the ninth) has been updated to read ‘avoid and minimise harm to the integrity and authenticity of the WHS and the assets that contribute to the Outstanding Universal Value (OUV) of the WHS’.
3.3.7	<p><u>Interruptions and Delays</u></p> <p>Section 6.1.20 sets out circumstances where work on site may have to be suspended if conditions are poor and continued works activity may lead to damage to archaeological remains. It is important to note here that the Council, as lead curator, must not only be consulted if this is the case, but be able to monitor site conditions and have the ability to require works to cease.</p>	Highways England have updated the dDAMS for submission at deadline 6 [REP6-013], which includes updated provisions for interruptions and delays at paragraph 6.1.21 (page 78). Those amendments provide the opportunity for Wiltshire Council and Historic England and, for sites within the WHS, HMAG, to input to decisions regarding cessation or resumption of work through the monitoring provisions described in section 8 of the dDAMS.
3.3.8	<p><u>Temporary Haul Roads</u></p> <p>Additional clarification is needed to set out that measures can be reversed without impact on archaeological remains, and that any</p>	Highways England have updated the dDAMS for submission at deadline 6 [REP6-013], which includes updated provisions for temporary haul roads at paragraphs 5.2.28 – 5.2.35 (pages 64 - 65) including clarifications on how the

	topsoil removal must be kept to the absolute minimum (5.2.37).	measures for haul roads, where archaeological remains are to be preserved in situ, can be reversed and also ensuring no-dig solutions are utilised.
3.3.9	<p><u>Detailed Mitigation Measures by Scheme Area</u></p> <p>The Council needs to assess, agree and approve the detail contained in Appendix D – preservation areas, and Appendix E – proposed archaeological fieldwork areas. For some of these areas, additional information has been requested and the Council is not currently able to approve the proposed approach in this version of the document. It is therefore likely that the number of sites referred to in Sections 4.3.2-6 will need to be revised.</p> <p>Whilst most of the mitigation work will take place in the Preliminary Works phase, the Council notes that Section 5.1.7 refers to some potential overlap with the Main Works phase. There needs to be a mechanism for managing any overlap, especially if different archaeological contractors are employed for each phase. Wiltshire Council would like some input into the documentation and tender process in terms of selecting appropriate archaeological contractors as referred to in 5.1.9.</p> <p>Tunnel movement monitoring stations are still under discussion (Sections 5.2.6-8); Wiltshire Council favours an approach which has no ground intrusion.</p>	<p>Highways England continues to engage with HMAG members, Wiltshire Council and Historic England with a view to agreeing all aspects of the dDAMS. We look forward to receiving Wiltshire Council's comments with regards to the revised (and amalgamated) Appendix D Action Areas: Proposed Archaeological fieldwork areas and preservation in situ areas in the dDAMS as issued at deadline 6 [REP6-013]. The additional information has been supplied to Wiltshire Council and was discussed with the Council in a meeting on 1st August. The dDAMS has been updated and revised for submission at deadline 7.</p> <p>Highways England acknowledges that the transition between the Preliminary Works and the Main Works phases is important to the delivery of the DAMS and an appropriate mechanism for this has been included in the draft DAMS as submitted at deadline 7 [paragraphs 5.1.9-5.1.12].</p> <p>Regarding the tendering process, documentation, and selection of archaeological contractors, this is a matter for Highways England, and involvement from Wiltshire Council is not considered appropriate or justified. The archaeological contractors will be required to comply with the terms of the DAMS and the plans and statements sitting under it, which Wiltshire Council will have been consulted on or will have approved.</p> <p>The draft DAMS as submitted at deadline 6 includes information regarding the ground movement monitoring stations [REP6-013; paras. 5.2.6-5.2.8]. Wiltshire Council's preference for these to incorporate a 'no ground intrusion' solution is noted.</p>
3.3.10	<p><u>Digital Data Management Plan</u></p> <p>It is good to see this Section (6.9.9) included in the draft DAMS. However, further detail needs to be added to confirm the timeframe for its approval and that this will be developed and approved before the start of the mitigation phase for both Preliminary Works and Main Works stages. There also needs to be confirmation that the local</p>	<p>Highways England acknowledges Wiltshire Council's comments. Highways England can confirm that the Digital Data Management Plan will be prepared by the Archaeological Contractor prior to the start of the Preliminary Works phase (DAMS Submitted at deadline 7, para. 6.9.9). The Digital Data Management Plan will be developed in consultation with the Wiltshire & Swindon Historic Environment Record which is maintained by Wiltshire Council and HMAG members (as necessary) and will be approved by</p>

	<p>authority will be able to approve the final version of the management plan.</p>	<p>Highways England as the body responsible for the commissioning of archaeological works that may generate archaeological digital data and ensuring that that data is maintained and kept secure through all phases of the project. The requirements as set out in the DAMS for managing digital data, have been developed following consultation with Wiltshire Council, Historic England and members of HMAG, and are sufficiently detailed to enable the securing of this aspect of the strategy at this stage.</p>
3.3.11	<p><u>Public Archaeology and Community Engagement</u></p> <p>The Council welcomes the inclusion of this Section (5.4) and the additional information requested in the draft DAMS and the Strategy (Appendix E) which aims to deliver a legacy from the archaeological investigations undertaken for the Scheme. The key sections the Council thinks is missing now is one on implementation and approval. The final version of the DAMS needs to include an Action Plan for delivery for the strategy and an agreed timetable, which needs to state that the delivery will start before the archaeological mitigation works commence. There needs to be confirmation of which organisation(s) will approve and sign-off on the delivery of the actions.</p>	<p>Highways England acknowledges Wiltshire Council's comments. An action plan for the Public Archaeology and Community Engagement (PACE) strategy [REP6-013; Appendix E], is currently being developed in consultation with Wiltshire Council, Historic England and members of HMAG. This will be included in the final DAMS as submitted at deadline 8, once its content has been agreed.</p> <p>Highways England can confirm that the PACE strategy will start to be implemented in advance of the Preliminary Works phase [See the draft DAMS submitted at deadline 7; Flowchart A.10]. The PACE Strategy is part of Highways England's legacy and benefits programme and will be developed, implemented and approved by the Applicant. With regards to consultation on the PACE strategy as it is taken forward, this is as stated in Appendix E, para. E.14.6.1:</p> <p><i>'The PACE programme will be developed in close consultation with HMAG and ASAHRG, and the Stonehenge and Avebury World Heritage Site Steering Committees and WHS Partnership Panel. Other potential consultees may include representatives of museums, Wiltshire Council Arts and Community Services, community networks, civic fora and local archaeology and history groups.'</i></p>
3.3.12	<p><u>Approval and Sign-Off of Archaeological Mitigation Works and Related Documentation</u></p> <p>The Council is pleased to see the further development of the Communication Strategy in Section 2 and Appendix A setting out the organisations involved in the sign-off process. However, the Council thinks more detail is needed to further clarify and highlight the approving bodies for all documentation and all stages of mitigation.</p>	<p>Highways England has updated Section 8 of the dDAMS [REP6-013] to provide further detail of the proposed approval of SSWSIs, Heritage Management Plans and Method Statements.</p> <p>Regarding the Signing-off of Archaeological Works, the revised DAMS, as submitted at deadline 7, includes updated text on the validation of completion statements (at para. 8.4.2) by Wiltshire Council, (in consultation with Historic England to the extent that the works would ordinarily trigger the need for</p>

	<p>There needs to be a clear distinction between organisations consulted (advisory role) and those that are consulted and are approving (statutory roles). It is particularly important to emphasise the role of the local authority archaeology service as the approving body for all the Site Specific Written Schemes of Investigation. In relation to roles and responsibilities, it would be useful if Section 1.3 cross references to Appendix A, and Section 1.3.3 emphasises that the approval/ sign-off at the site visits will be done by the statutory bodies only.</p>	<p>scheduled monument consent), to confirm that the relevant works have been completed in compliance with the relevant SSWSI.</p>
3.4	Responses to the ExA's Second Round of Written Questions	
	Matter Raised	Highways England's Response
3.4.1	<p>[In response to Ag.2.5]</p> <p>Wiltshire Council were asked to consider the use of PROW AMES 9a for part of this access, but to date have heard no more. It will be helpful to know if this option is still under discussion</p>	<p>This issue was discussed at the compulsory acquisition hearing held on 9-10 July 2019 and was subsequently reported in the Applicant's written summary of oral submissions made at that hearing [REP5-002] on pages 2-31 and 2-32. A response to Written Question Ag.2.5 was also provided by the Applicant at deadline 6 [REP6-019], setting out the basis on which alternative access proposals have been offered to the affected person.</p>
3.4.2	<p>[In response to CH.2.2]</p> <p>Wiltshire Council maintains the view that all areas of the road line need to be mitigated. This is a highly sensitive area for archaeology, both inside and outside the WHS. Both the geophysical survey and trial trenching at 5% outside of the WHS are likely to have missed picking up the kind of small, discreet earlier prehistoric features such as pits and burials that would be expected to be found in the landscape. The Council considers that it is too much of a risk to leave areas unmitigated.</p>	<p>The draft DAMS [REP6-013] is being revised and will be submitted at deadline 7. The next version will reflect Wiltshire Council's concerns.</p>

3.4.3	<p>[In response to De.2.5]</p> <p>As the statutory body regarding planning matters, the final decision on the detailed design should rest with Wiltshire Council, particularly in such a sensitive site as this.</p>	<p>Please see the Applicant's response to Written Question De.2.5 [REP6-023], which sets out the Applicant's position on this point.</p>
3.4.4	<p>[In response to Ec.2.1]</p> <p>The Council considers that in the absence of an agreement, the currently proposed mitigation is unsound (because it relies on that agreement) and cannot be included in the HRA as mitigation for the Scheme and so the Appropriate Assessment would not be able to conclude "no likely significant effect" or no significant adverse impact to the favourable conservation status of the Salisbury Plain SPA, therefore the Scheme is not compliant with the EU legislation and should not be determined until an alternative mitigation strategy is in place, one that has certainty of deliverability. See part i. for what this might need to include.</p>	<p>Highways England understands that Wiltshire Council's concerns related to any reliance on enhanced fencing, but, as stated in previous submissions (in its response to Written Question Ec.2.1 [REP6-024]), there has been no reliance on such fencing to reach the conclusions set out in Highways England's Statement to Inform Appropriate Assessment. In its response to the Written Question Ec.2.1 to 2.3, [REP6-024], Highways England described its proposals in respect of the provision of stone curlew nesting opportunities in the vicinity of the Scheme. Highways England has committed to securing two additional stone curlew plots. As also stated in those responses, it is Highways England's understanding that RSPB and Natural England are confident suitable sites can be found and secured and agree that Highways England's commitment to provide the stone curlew nesting opportunities proposed ensures, beyond reasonable doubt, that there would be no adverse effects on the integrity of the relevant European site. As such, Highways England does not agree that there is any non-compliance with EU law.</p>
3.4.5	<p>[In response to CA.2.43]</p> <p>Wiltshire Council were asked to consider the use of PROW AMES 9a for part of this access, but to date have heard no more. It will be helpful to know if this option is still under discussion.</p>	<p>The response to this question is provided in full within the Applicant's response to Second Written Question Ag.2.5. The Applicant's position on the issue remains as set out in its written summary of oral submissions made at the Compulsory Acquisition Hearing [REP5-002] held on 9 and 10 July 2019 [REP5-002, at pages 2-31 to 2-32].</p>
3.4.6	<p>[In response to DCO.2.9]</p> <p>Discussions have taken place between HE and Wiltshire Council and an amended dDCO incorporating appropriate and sufficient protective provisions for the protection of drainage authorities as agreed in the discussions has now been sent to HE.</p>	<p>Good progress is being made with the protective provisions for the benefit of drainage authorities and it is anticipated that agreement on them will be reached soon.</p>

3.4.7	<p>[In response to DCO.2.14]</p> <p>With regards to the vertical LoD, HE must ensure that the invert level of any infiltration feature is at least 1m above the top groundwater level (the maximum of modelled or recorded) to ensure effective operation. Furthermore, Wiltshire Council's archaeology service require consultation before the proposed LOD are invoked.</p>	<p>The Applicant considers the proposal to require consultation on the exercise of the limits of deviation for the purposes of regulating the detail of the drainage system is misdirected. It is not the purpose of limits of deviation to establish the detail of the drainage system.</p> <p>The detailed design of the highway drainage system is subject to the Secretary of State's approval under requirement 10, following consultation with Wiltshire Council and the Environment Agency. The drainage scheme submitted for approval is required to be based on the mitigation measures set out in the ES. The Road Drainage Strategy [REP2-010], which forms part of the ES upon which the detailed scheme under requirement 10 must be based, sets out at Table 2.1 invert levels and maximum recorded groundwater levels, indicating that the design can comfortably achieve the desired 1 metre clearance.</p> <p>For the reasons set out in DCO.2.11 [REP6-027] the Applicant considers it to be inappropriate to be required to consult on the exercise of limits of deviation. Namely that the LoDs establish the proportionate degree of flexibility, which has been assessed in the Environmental Statement, and which is being examined and discussed by all Interested Parties during the current examination.</p> <p>The Applicant further notes that the DAMS was updated at deadline 6 [REP6-014] to provide for Wiltshire Council's approval of archaeological SSWSIs among other documents (see section 8.5) providing Wiltshire Council with a greater degree of influence over the archaeological work associated with the Scheme.</p>
3.4.8	<p>[In response to DCO.2.26]</p> <p>There are still some outstanding concerns although it should be noted that the Council is currently still in discussion with HE regarding this.</p>	<p>The Applicant has discussed the principles of the proposed tunnel restrictions with the affected landowners and heritage stakeholders (including Wiltshire Council); the principles of the tunnel restrictions are agreed with the National Trust.</p>
3.4.9	<p>[In response to DCO.2.33]</p>	<p>Please see the Applicant's response to part (iii) of the Examining Authority second Written Question DCO.2.32; in summary, the change requested by Wiltshire Council has been made to the version of the OEMP submitted at deadline 6 [REP6-011], see measure PW-WAT3.</p>

	This request has been included because of the potential for the preliminary works (such as site clearance) to change the drainage characteristics of the area and have an impact on flood risk.	
3.4.10	<p>[In response to DCO.2.37]</p> <p>i. Wiltshire Council and other key stakeholders continue to discuss the development of the OEMP, including the design principles and dispute mechanism, with HE. The Council's position is unchanged in that it considers it inappropriate for HE to approve the CEMP and a number of other plans / documents.</p> <p>A number of drafts of the OEMP have been sent to the Council by HE and it is the Council's understanding that a further revision of the OEMP will be submitted by HE into Examination shortly. To avoid potential confusion to the ExA and parties arising from amendments to the various drafts received from HE to date, the Council will provide detailed comments on this updated version of the OEMP at the next deadline following submission.</p> <p>ii. As set out in the Council's comments on the dDCO submitted at Deadline 4 (REP4-039), Wiltshire Council considers that additional requirements are necessary to provide adequate safeguards. This included additional requirements for the CEMP, traffic monitoring and mitigation, highway lighting scheme, traffic management during tunnel closures, flood risk assessment, and approval of amendments to approved details. The Council also suggested expanded requirements for archaeology, implementation and maintenance of landscaping, traffic management, and details of consultation.</p> <p>iii. The Council will be seeking further drafting changes to the OEMP. As mentioned in point i. above, the Council understands that a revised version will be submitted into Examination shortly, upon which the Council will provide further comment.</p>	<p>i. An updated version of the OEMP was submitted at deadline 6 [REP6-012]. The updates include a new design vision for the Scheme together with further design principles and refinements to the stakeholder design consultation provisions. Workshops have been arranged to discuss the updates to section 4 of the OEMP with a view to its finalisation. The Applicant has set out the reasons it considers it to be the appropriate body to approve the CEMP in its response to Written Questions DCO.2.44 and DCO.2.47 [REP6-027].</p> <p>ii. In relation to Wiltshire Council's proposed requirements and amendments to existing requirements please see the Applicant's responses to Written Questions DCO.2.54, DCO.2.58, DCO.2.61, DCO.2.62, DCO.2.63, DCO.2.66 [REP6-035].</p> <p>iii. An updated version of the OEMP was submitted at deadline 6 [REP6-012] following discussions with Wiltshire Council and other stakeholders.</p>

3.4.11 [In response to DCO.2.40]

i. Matters are still under discussion on an appropriate mechanism. As referenced in DCO.2.37 above, Wiltshire Council understands that a revised version of the OEMP will be submitted into Examination shortly. The Council will provide further comments on the document at the deadline following its submission.

ii. The Council considers that there would be a benefit to having a specific design document secured by a DCO Requirement, as the design elements and design principles as drafted in the OEMP are very high level. In the event that it was proposed for this additional requirement to be approved by the Secretary of State, reference should be made to consultation with stakeholders in advance of a decision being taken. This would allow the Council and other key consultees more of an influence over the detail of the design elements as they evolve through the different stages of the Scheme. The Council's view is that this would also mitigate against any dilution of intent between the OEMP stated principles, and the evolution of the CEMP by the Contractor.

The Council acknowledges that it is the intention for the next version of the OEMP to include a new provision on design parameters. Following the Council's review of the revised OEMP, the Council will confirm whether the Council's current position as outlined above is still considered necessary.

i. As noted in the response, section 4 of the OEMP was updated at deadline 6 [REP6-011] to incorporate the Design Vision for the Scheme – this will inform the detailed design moving forward. Section 4 of the OEMP fulfils the role of establishing an overall vision for the design of the Scheme, together with design principles and a robust mechanism for consultation on aspects of the detailed design for the Scheme, alongside the design commitments that would be confirmed through the making of the Order.

Following further engagement with the heritage stakeholders since deadline 6 the Applicant has submitted at deadline 7 illustrations showing examples of how the design principles could look in practice for key design elements, applying the design vision, principles and commitments. A workshop is planned for shortly after deadline 7 to review section 4 of the OEMP with a view to finalising it.

The Applicant considers that points 1 to 3 of its response to Written Question DCO.1.81 (ii) [REP2-030] are addressed through the OEMP by:

- 1) inclusion in the REAC tables of the "D" prefix design commitments;
- 2) inclusion in section 4 of the OEMP of the design vision and design principles; and
- 3) inclusion in section 4 of the OEMP the mechanism for stakeholder consultation on detailed design.

ii. The Applicant therefore considers that section 4 of the OEMP achieves what is sought by the Council and that a separate document and DCO Requirement is not needed.

The design vision and design principles are necessarily high level – that is their purpose – but some principles e.g, re materials are more specific. Moreover, the OEMP contains multiple specific detailed design commitments that are not high level in any way.

As set out above, the OEMP therefore already addresses the desire for more detail on design parameters. The Vision explains how the Scheme design will take account of cultural heritage. For example, the first aim of the Vision is described as 'Respecting and Responding to the Historic Landscape' (para 4.2.6); and the Vision for the central section is to sustain the OUV of the WHS

		<p>and to give due consideration of the objectives and policies of the WHSMP (para 4.2.10). The detail to achieve that vision is contained in the design principles and the design commitments contained in the OEMP.</p> <p>As noted above, following further engagement with the heritage stakeholders since deadline 6 the Applicant has submitted at deadline 7 illustrations showing examples of how the design principles could look in practice for key design elements, applying the design vision, principles and commitments.</p> <p>The OEMP is already subject to the approval of the Secretary of State via the making of the Order and the certification of the OEMP. The OEMP sets out detailed provision for consultation of Wiltshire Council and other key consultees on the key aspects of the detailed design of the scheme and on many other aspects of the documents and obligations required under the OEMP that will be developed throughout detailed design. The OEMP, compliance with which is secured by Requirement 4 of the draft DCO [REP6-005], requires that the CEMP is produced in accordance with its terms, therefore there is no question of dilution of its intent in the CEMP.</p> <p>The points raised by the Council in relation to design parameters have therefore already been addressed in the OEMP. The Applicant understands from discussions that the Council is content for these matters to be dealt with there and looks forward to receiving any comments from the Council on the deadline 6 OEMP.</p>
3.4.12	<p>[In response to DCO.2.43]</p> <p>The consultation commitments contained within the Development of Detailed Design section of the amended OEMP are noted. However, due to the importance of consultation with relevant stakeholders, the Council directs the ExA to its previously suggested amendments to Requirement 11, submitted as part of its comments on the dDCO at Deadline 4 (REP4-039).</p> <p>The Council considers these amendments are necessary so that stakeholders are provided a copy of the consultation report to ensure that feedback has been represented accurately. Furthermore, the current wording does not require HE to ensure that the consultation responses are reflected in their submission; they only need to state</p>	<p>As noted above, the Applicant considers that section 4 of the OEMP, including the amendments made at deadline 6 achieves what is sought by the Council with respect of the design of the Scheme and that a separate document and DCO Requirement is therefore not needed.</p> <p>With respect to requirement 11, the Applicant adopted some, but not all, of Wiltshire Council's suggested drafting. Please see the Applicant's response to Written Question DCO.2.63 [REP6-027] for further details.</p> <p>With respect to Wiltshire Council's proposed additional requirement in relation to the CEMP, please see the Applicant's response to Written Question DCO.2.65.</p>

	<p>their reasons for not including them. The Council considers that the suggested amendments would address this crucial point.</p> <p>Furthermore, Wiltshire Council requests the ExA consider the Council's suggestion for the inclusion of an additional Requirement relating to the Construction Environmental Management Plan (CEMP). The rationale for the inclusion of this Requirement is detailed within the Council's Deadline 4 comments on the dDCO (REP4-039).</p>	
3.4.13	<p>[In response to DCO.2.46]</p> <p>As previously indicated, the Council does not consider it appropriate for HE to be the approving body of the CEMP and other management plans / documents.</p> <p>Wiltshire Council has indicated below those plans which it considers necessary for the Council to approve before commencement of work, along with the rationale behind this.</p> <ul style="list-style-type: none"> • The Detailed Archaeological Mitigation Strategy and all the Site Specific Written Schemes of Investigations (SSWSIs) to ensure the mitigation for the Scheme reflects the scale of impact on this highly significant archaeological landscape; • Emergency Preparedness and Response Plan – powers under the Civil Contingencies Act 2004; • Noise and Vibration Management Plan and Noise Insulation and Temporary Rehousing Policy - under noise nuisance powers of the Environmental Protection Act 1990; • Pollution Incident Control Plan - Powers under the Environmental Protection Act 1990 and the Civil Contingencies Act 2004; • Any contaminated land remediation proposals or schemes; • Traffic Management Plan (to include a Construction Workforce Travel Plan, a Site Access Plan, construction traffic routing details and a Site Travel Plan). To ensure suitability for and 	<p>Highways England responded to the issue of approvals and the Outline Environmental Management Plan (OEMP), and in particular why the current proposed mechanism is appropriate in the context of the Scheme, in its responses to the Written Questions DCO.2.44 and 2.47 [REP6-027]. The rationale for this focussed on (a) the consultation required to be undertaken in developing the management plans / documents under the OEMP, meaning that views of stakeholders, including Wiltshire Council, would need to be conscientiously taken into account; (b) Highways England's status as a Government-owned company and the associated duties in respect of the strategic roads network and safeguards that link to that status through its Licence, amongst other things; and (c) Highways England's unique expertise and experience when it comes to matters related to the strategic road network, compared to the local highway authority. For these reasons, Highways England maintains that the current mechanism contained in the OEMP for approvals is appropriate and proportionate, given the nature of the Scheme and Highways England's status.</p> <p>Turning to each individual management plan / document that Wiltshire Council proposes is approved by it, Highways England has set out its responses below:</p> <p>Detailed Archaeological Mitigation Strategy and all the Site-Specific Written Schemes of Investigations (SSWSIs) – the DAMS is proposed to be a certified document and is being developed as part of the examination process (indeed, Highways England is working closely with Wiltshire Council on this). Under the framework contained in the DAMS, SSWSIs and other subsidiary documents are to be subject to approval by Wiltshire Council. Compliance with the DAMS is secured by Requirement 5 of the DCO, which</p>

safety of users, and that the traffic impacts during construction do not unreasonably or disproportionately affect traffic conditions on the local roads, and potential unintended consequences for local economic interests e.g. trading in Amesbury;

- Fencing design (both temporary and permanent) and its exact location within the WHS, where maintenance responsibility will pass to Wiltshire Council Rights of Way and Countryside;
- Detailed design plans / drawings / specifications of all new public rights of way where maintenance responsibility will pass to Wiltshire Council Rights of Way and Countryside as the Local Highway Authority;
- Landscape and Ecology Management Plan, as this sets out the requirements and responsibilities for the management of landscape and ecological features following the completion of the works. The LEMP is critical to the delivery of new landscapes e.g. the new chalk grassland and the mitigation identified within the ES;
- Arboricultural Mitigation Strategy, as requested by the Wiltshire Council Arboriculture Officer, deals with the mitigation for trees to be removed and the management and protection of those to be retained. Tree protection will need to be appropriate but have regard to the sensitivities of the WHS landscape;
- Heritage Management Plan, to ensure the Council is satisfied with the level of detail and the decision-making process set out for the approaches;
- Ground Movement Monitoring Strategy, to ensure that the Council is satisfied with the level of detail and the decision-making process set out for the approaches;
- Soils Management Strategy, to ensure that the Council is satisfied with the level of detail and the decision-making process set out for the approaches. The Council will work with

is a legally binding obligation. Given this, no further approvals of archaeological documents are required to be included on the face of the DCO – Wiltshire Council already has an approval role under the proposed framework to be implemented.

Emergency Preparedness and Response Plan - The provisions in the OEMP require the Emergency Preparedness and Response Plan to be developed in consultation with Wiltshire Council, the Environment Agency and the emergency services (item MW-G20 of the OEMP). As such, all comments from these stakeholders will be conscientiously considered. So while Wiltshire Council's input will be important, given Highways England's statutory responsibility to deliver improvements to the strategic roads network and its experience of constructing trunk road projects and the emergency measures required to be put in place for those and their effectiveness, it is appropriate that it, not a local planning authority, approves the relevant management plan. The plan is designed to deal predominantly with risks occurring on site, and so will concern internal management (including environmental management) processes appropriate for approval by Highways England.

Noise and Vibration Management Plan and Noise Insulation and Temporary Rehousing Policy — The OEMP contains a number of obligations in respect of noise mitigation, which must be complied with and written into the Noise and Vibration Management Plan (the NVMP). The NVMP must be developed in consultation with Wiltshire Council and therefore any comments received as part of this process must be conscientiously taken into account. Highways England is subject to a legal duty to minimise impacts, including noise impacts, on the environment and is expert in constructing trunk roads projects in a compliant manner, including managing noise and vibration impacts. The OEMP contains sufficiently precise provisions in respect of temporary rehousing (see items PW-NOI6 and MW-NOI4), meaning there is no need for a further approval at a later stage. Compliance with the OEMP is secured by Requirement 4 of the DCO.

Pollution Incident Control Plan — Fundamentally, pollution control is a matter for the Environment Agency, and there are a number of separate regulatory controls that the Scheme will be subject to, in addition to the controls contained in, and secured by, the DCO and the OEMP. The Pollution Incident Control Plan will be developed in consultation with a number of

key stakeholders to develop best practice as appropriate to this Scheme.

For the avoidance of doubt, the Council can confirm that it is content for HE to be the approving body of the following plans; provided that conscientious consultation is undertaken with the Council and other key stakeholders beforehand, as secured in the Council's proposed revised wording for Requirement 11 (REP4-039).

- Water Management Plan (to include a Flood Risk Management Plan);
- Groundwater Management Plan;
- Site Waste Management Plan;
- Materials Management Plan;
- Tunnel Ventilation Strategy;

Invasive non-native species (INNS) Management Plan, provided that national policy and guidance is followed.

stakeholders, not just Wiltshire Council. For these reasons, it is not considered necessary or appropriate for Wiltshire Council to have a final approval role in respect of this Plan.

Any contaminated land remediation proposals or schemes — The DCO, at Requirement 7, contains detailed provisions for dealing with contaminated land. The mechanism ensures the close involvement of both the Environment Agency and Wiltshire Council throughout the process, with ultimate Secretary of State approval of any remediation measures required. Highways England is not aware of the Council having submitted that it, not the Secretary of State, should be the approver under Requirement 7. Given the context of the Scheme, the low contamination risk identified in the ES and the roles of both bodies, the current mechanism is considered robust and appropriate and does not require a further or supplementary approval role for Wiltshire Council.

Traffic Management Plan (to include a Construction Workforce Travel Plan, a Site Access Plan, construction traffic routeing details and a Site Travel Plan) – The Traffic Management Plan is subject to approval by the Secretary of State under Requirement 9, in consultation with Wiltshire Council. Highways England has understood Wiltshire Council to be content with this approach. The OEMP sets out items for inclusion in the Traffic Management Plan. With the express provision for consultation with Wiltshire Council in the requirement and in the OEMP it is considered that the Secretary of State is the appropriate final approval body for this management plan, given the potential impacts on both the strategic and local road network and the need for Highways England to ensure the effective, efficient and safe operation of the strategic network.

Fencing design (both temporary and permanent) and its exact location within the WHS, where maintenance responsibility will pass to Wiltshire Council Rights of Way and Countryside - The OEMP contains a number of design commitments in respect of fencing within the WHS – see items PW-CH1, PW-CH4, MW-CH3 (which requires Wiltshire Council approval), D-CH14 and D-CH24 for example. Compliance with these is secured by Requirement 4 in the DCO and so is a legal obligation. The OEMP also contains consultation requirements in respect of the design of certain fencing in the WHS (para 4.5 onwards). In addition, the precise handover mechanics of these new sections of public rights of way would be contained in the legal

agreement currently being discussed between Wiltshire Council and Highways England. Lastly, article 9 of the DCO provides that any highways to be constructed under the DCO must be completed to the reasonable satisfaction of the local highway authority. As such, no separate design approval is required under the DCO requirements.

Detailed design plans / drawings / specifications of all new public rights of way where maintenance responsibility will pass to Wiltshire Council Rights of Way and Countryside as the Local Highway Authority – The OEMP contains a number of design commitments in respect of the new public rights of way – see items P-PRoW1-4 for example. Compliance with these is secured by Requirement 4 in the DCO and so is a legal obligation. The OEMP also contains consultation requirements in respect of the design of the public rights of way in the WHS (para 4.5 onwards). In addition, the precise handover mechanics of these new sections of public rights of way would be contained in the legal agreement currently being discussed between Wiltshire Council and Highways England. Lastly, article 9 of the DCO provides that any highways to be constructed under the DCO must be completed to the reasonable satisfaction of the local highway authority. As such, no separate design approval under the DCO requirements is required.

Landscape and Ecology Management Plan — Under Requirement 8 of the DCO, Highways England is required to submit a landscaping scheme to the Secretary of State for approval, after consultation with Wiltshire Council and, in certain circumstances, Historic England. As such, this will set out the principles of landscaping that must be adhered to. Any landscaping management plans produced under the OEMP will need to sit within this framework. As such, given that the landscaping proposals would be subject to third party approval, a further approval of the LEMP is considered unnecessary and has the potential to throw up inconsistencies.

Arboricultural Mitigation Strategy – Please see the points made above in respect of the Landscape and Ecology Management Plan.

Heritage Management Plan – See above response on the DAMS, which specifies that Heritage Management Plans would be subject to approval by Wiltshire Council.

Ground Movement Monitoring Strategy, to ensure that the Council is

satisfied with the level of detail and the decision-making process set out for the approaches; - As set out above for a number of the management plans under the OEMP, this management plan is subject to consultation with HMAG (not just Wiltshire Council) so comments will need to be taken into account conscientiously by Highways England. Highways England is unsure what statutory functions require that the Council must have the final approval of the level of detail and decision-making process under the strategy. Highways England's statutory and common law responsibilities regarding the environment, safety and to landowners mean that it will need to make appropriate provision to respond to any ground movement. It should also be noted that the DAMS (see commentary above) contains obligations in respect of Heritage Management Plans, which will themselves contain ground movement provisions (and are subject to approval by Wiltshire Council).

Soils Management Strategy, to ensure that the Council is satisfied with the level of detail and the decision-making process set out for the approaches. The Council will work with key stakeholders to develop best practice as appropriate to this Scheme – It is respectfully submitted that the matters to be contained in this management strategy are not solely within the purview of Wiltshire Council, so an approval role in that context is not necessary or appropriate. A consultation role is considered sufficient. In addition, the Soil Management Strategy needs to be based on an outline strategy, so there is an overarching framework in place within which the Soils Management Strategy would need to be produced. As a final point, Highways England wishes to make clear that were any third party approvals to be needed in the context of the OEMP, the appropriate final approver would be the Secretary of State, not Wiltshire Council. This is because of (a) the unique nature of trunk road schemes which require strategic, rather than local, considerations (b) the therefore long established position that where approvals are required in respect of the improvement of the strategic roads network, those come from the Secretary of State, not the local planning authority (and the Council defers to Highways England on matters relating to the strategic road network) and (c) following this model, the Requirements in the draft DCO dealing with the key approvals required already make provision for the Secretary of State's approval, and so to avoid conflicting decisions, any further approvals ought to take a consistent approach. This approach is well preceded throughout other made Highways England DCOs.

		Highways England continues discussions with Wiltshire Council on these points.
3.4.14	<p>[In response to DCO.2.51]</p> <p>Lighting is specified in table 3.2b of the OEMP (D-CH9) but no detail apart from minimising spillage outside of the portals' footprint is provided. Whilst it is acknowledged that HE may prefer for additional details to be included within the OEMP rather than including them in the DCO itself, in order to avoid the risk for any subsequent amendment to the DCO being required if the design changes, the ExA is respectfully directed to Wiltshire Council's response to question DCO.2.66 below. The Council considers that, if the Requirement as set out under heading 'Highway Lighting Scheme' is accepted and included in the dDCO; the issue raised can be sensibly addressed by an approved discharge of that Requirement.</p>	Please see the Applicant's response to Written Question DCO.2.65 [REP6-027] and comments on Wiltshire Council's response to item 3.4.20 below.
3.4.15	<p>[In response to DCO.2.52]</p> <p>i. All that has been discussed to date are broad design principles. These have not been agreed as discussions on the OEMP continue. The OEMP needs to make a firm commitment to the provision of detailed design and construction drawings and specifications to be approved by Wiltshire Council as the local highway authority.</p> <p>ii. The impending revised OEMP is expected to provide additional information and detail of design commitments and principles. Once the Council has sight of this document, the Council shall be able to consider whether a further specific Requirement is necessary.</p>	<p>i. Highways England responded to the issue of approvals by Wiltshire Council in its responses to the Written Questions DCO.2.44 and 2.47 [REP6-027]. The rationale for this focussed on (a) the consultation required to be undertaken in under the obligations in the OEMP and elsewhere, meaning that views of stakeholders, including Wiltshire Council, would need to be conscientiously taken into account; (b) Highways England's status as a Government-owned company and the associated duties and safeguards that link to that status through its Licence, amongst other things; and (c) predominantly in this case, Highways England's unique expertise and experience when it comes to matters related to the strategic road network, compared to the local highway authority. Highways England continues to discuss these matters with Wiltshire Council.</p> <p>In addition, the precise handover mechanics of these new sections of public rights of way would be contained in the legal agreement currently being discussed between Wiltshire Council and Highways England. Good progress is being made in these discussions and a number of matters are expected to be confirmed as agreed in principle in the SoCG submitted at deadline 7.</p>

		<p>Lastly, article 9 of the DCO provides that any highways to be constructed under the DCO must be completed to the reasonable satisfaction of the local highway authority.</p> <p>For these reasons, Highways England maintains that the current mechanisms contained in the OEMP (and to be contained the legal agreement) are appropriate and proportionate, given the nature of the Scheme and Highways England's status and, as such, it is not necessary or appropriate for Wiltshire Council to have an approval role on detailed design under the DCO.</p> <p>In relation to the OEMP, the Applicant would also note that the DCO (in common with the majority of made DCOs to date) does not seek to authorise a fully detailed and designed Scheme. Furthermore, the concept of Design Principles is well preceded in DCOs.</p> <p>The OEMP at deadline 6, building on previous versions of the OEMP includes:</p> <ul style="list-style-type: none"> • Multiple, detailed Design Commitments within the REAC tables which provide for specific design measures that must be implemented. • A Design Vision which explains the philosophy that must underpin the detailed design moving forward, including consultation with the SCDG. • A large number of principles which cover the full range of design matters that will affect the Scheme (i.e. they are not just broad to the Scheme as a whole (with principles P-PRoW1-4 dealing with PRoW issues such as surfacing, fencing and signage)). <p>It is therefore clear that the OEMP provides for an extensive range of controls on, and directions for, detailed design. In combination with the measures and the agreement mentioned above, these controls mean that no further provision is necessary in the DCO.</p> <p>ii. The Applicant Acknowledges that the Wiltshire Council will need to review the deadline 6 OEMP. Discussions with Wiltshire Council, and other key stakeholders, on the contents of the OEMP are progressing.</p>
3.4.16	[In response to DCO.2.55]	<p>Please see the Applicant's response to Written Question DCO.2.54. The Applicant further notes that Wiltshire Council has yet to offer detailed reasoning to support the necessity and reasonableness of the amendments it</p>

	It is the view of Wiltshire Council that the additional wording requested for Requirement 5 will help to secure the delivery of key elements of the Archaeological Mitigation Strategy.	requests, either in [REP4-039] where its proposed drafting is first proposed, or subsequently.
3.4.17	<p>[In response to DCO.2.57]</p> <p>The Council is supportive of the Environment Agency (EA) comments on Requirement 7 and their recommendations of changes to the wording. Requirement 7 needs to reference both the EA and Wiltshire Council as both have responsibilities under Part 2 (a) of the Environmental Protection Act 1990. The wording on MW-GEO2 in the OEMP provides additional wording which could be added to Requirement 7 in the dDCO.</p>	<p>The Applicant notes that Environment Agency has confirmed in its response to Written Question DCO.2.57 [REP6-047] that it is content with the drafting of requirement, which requires consultation with both Wiltshire Council and the Environment Agency.</p> <p>There is no need to add the additional wording in MW-GEO2 to requirement 7 because it is already secured by requirement 4, and to do so would give rise to unnecessary duplication.</p> <p>The Applicant is considering amendments to the OEMP to provide clarity that, according to standard practice, the contractor will appropriately deal with contamination identified in the ES as part of its detailed design of the scheme.</p>
3.4.18	<p>[In response to DCO.2.59]</p> <p>Wiltshire Council's view is that yes, the requirement should be amended to include all fences, walls and enclosures.</p>	Please see the Applicant's response to Written Question DCO.2.59 [REP6-027]. In summary, the Applicant remains of the view that it is appropriate for only "noise fences and walls" to be expressly referred to in the requirement. Other fences and walls are regulated under other measures secured in the OEMP.
3.4.19	<p>[In response to DCO.2.64]</p> <p>The consultation commitments contained within the Development of Detailed Design section of the OEMP are noted. However, due to the importance of consultation with relevant stakeholders, the Council directs the ExA to its previously suggested amendments to Requirement 11, submitted as part of its comments on the dDCO at Deadline 4 (REP4-039).</p> <p>The Council considers that these amendments are necessary so that stakeholders are provided a copy of the consultation report to ensure that feedback has been represented accurately. Furthermore, the current wording does not require HE to ensure that the consultation responses are reflected in their submission; they only need to state</p>	Please see the Applicant's response to Written Question DCO.2.63 [REP6-027]. In summary, the Applicant has adopted the proposed wording, save for the wording requiring the submitted details to reflect the consultation responses. This is because the Applicant considers the legal duty to consult, which includes the duty to conscientiously consider responses, is well understood and there is no need to make further provision.

	their reasons for not including them. The Council considers that the suggested amendments would address this crucial point.	
3.4.20	<p>[In response to DCO.2.66]</p> <p>i. The Council set out a number of additional Requirement it considered necessary within its Comments on the dDCO submitted at Deadline 4. The Council has not replicated the suggested wording within this answer but has detailed the rationale for each of the additional Requirements in order below.</p> <p>Construction Environmental Management Plan (CEMP)</p> <p>The CEMP is such a crucial document that the Council believes that a separate Requirement is warranted. The Council does not consider it appropriate for HE to approve the CEMP, which is why it is suggesting that the Secretary of State is instead the approver. The Council believes that it is appropriate to state that the authorised development must be constructed in accordance with the approved CEMP, as opposed to the approved OEMP, as details are likely to change between the OEMP and CEMP and therefore it is better for it to be based on the detailed design. Furthermore, there is no mention of the HEMP in the current drafting by HE. The Council believe that this is incomplete, as the lifecycle of the OEMP is OEMP to CEMP to HEMP, so the proposed drafting closes this loop.</p> <p>Traffic Monitoring and Mitigation</p> <p>For the detailed reasoning for additional Requirement, Traffic Monitoring and Mitigation, the Council has accepted the assumptions and estimates submitted as part of the forecasting of the traffic impacts associated with the proposed development. In many cases, the forecasting assumptions in a Transport assessment prove to be inaccurate and not representative of actual outcomes. The Council, as the authority for the local roads (non- strategic network), wishes to understand the importance of between forecast and outturn, in order to assess whether or not any interventions are required, and how</p>	<p>Construction Environmental Management Plan (CEMP): Please see Highways England's responses to Written Questions DCO.2.44, DCO.2.47 and DCO.2.65 [REP6-027] as to why it considers the current arrangements for approval of matters within the Outline Environmental Management Plan, including in relation to the production of the CEMP, are appropriate. For this reason, Highways England does not consider a separate requirement is necessary – the DCO, through Requirement 4, secures compliance with the provisions of the OEMP, including the production of a CEMP and HEMP. Because of the content of the OEMP, it is appropriate for this document to be referenced in Requirement 4, not the CEMP. That the OEMP leads on to CEMPs and HEMPs is made clear in the expanded definition in Schedule 2 added to the dDCO at deadline 6 [REP6-005].</p> <p>Traffic Monitoring and Mitigation: Please see Highways England's response to Written Question DCO.2.65 [REP6-027] which set out why such a requirement is unnecessary, given the Transport Assessment [APP-247] does not assess any monitoring or mitigation as being required. Fundamentally, the modelling has been undertaken in line with established guidance and Wiltshire Council agrees with the methodology used, as documented in the Statement of Common Ground between the parties (an updated version of which has been submitted at deadline 7). The conclusions of it should therefore be considered robust. In respect of the citation of the A14 scheme, as stated in that response, the A14 and the current Scheme are very different projects with different impacts, so there is no justification for simply transposing a requirement from one scheme to another.</p> <p>Highway Lighting Scheme: Please see Highways England's response to Written Question DCO.2.65 [REP6-027] which set out why such a requirement is unnecessary. As explained, the Scheme is to be largely unlit, and the OEMP commits to various measures to ensure this. Where the Scheme is lit, it would be on Highways England's network, for which it is responsible and has significant experience and expertise in managing. As such, third party approval of lighting on this network would be inappropriate. In addition, the</p>

such interventions might be undertaken.

Part (1) of the additional Requirement establishes a firm timeframe in which a monitoring and mitigation scheme should be established and agreed with the local highway authority.

Part (2) of the requirement sets out a number of measures which it expects to be included in the scheme submitted for approval. The timeframe for the commencement of the monitoring (3 months after opening of the tunnels) is anticipated to be appropriate in relation to the establishment of near 'normal' conditions, following the inevitable local disruption, and the consequential impacts on drivers' behaviours and route decision taking. Point (i) seeks to establish an acceptable mechanism to determine what mitigation measures might be reasonably necessary, and how, when, by whom, and at which highway authority's costs.

As previously stated the Requirement is similar in form to a Requirement included in the made DCO for the A14 Scheme in Cambridgeshire.

Highway Lighting Scheme

Regarding the Highway Lighting Scheme, there is little reference in the OEMP in relation to street lighting on the Scheme. Whilst there is some considerable reference to site lighting (OEMP, MW-G29), the street lighting and traffic signals associated with the Scheme have not been comprehensively covered; D-CH7-CH12 (Table 3.2b of OEMP) make some general references to restrictions on street lighting, but do not offer any detail as to design. Also, Wiltshire Council considers that the ban on lighting under Green Bridge 4, between dawn and dusk, may have to be reviewed on safety grounds following operational experience. However, there are references within the submission relating to the principles around the issue of street lighting, including the need to minimise the extent of lighting beyond the tunnel and portal areas; to provide no street lighting at the Longbarrow junction, and to update lighting at the Countess junction to minimise light pollution. There is sparse information relating to the workings of the traffic signals controls at Countess

OEMP contains various consultation obligations in respect of the signing and lighting at the new Longbarrow junction and Countess junction. Highways England and Wiltshire Council continue to discuss the operation of signalling and lighting on assets which are, or will be, the responsibility of Wiltshire Council which, as alluded to in Wiltshire Council's submission, are capable of being dealt with in the proposed legal agreement between the parties. A DCO requirement dealing with highway lighting is therefore not necessary.

Tunnel Closure Plan: Please see Highways England's response to Written Question DCO.2.65 [REP6-027], and item 2.1.43 of Highways England's responses to comments on the OEMP [REP6-034] which consider this suggestion by Wiltshire Council, and clarify the relationship of the contractor and this plan to explain why it is appropriate for this matter to remain within the OEMP. Wiltshire's interest in this matter is understood but they will be consulted on the measures to be taken pursuant to item MW-TRA12 of the OEMP [REP6-011].

Flood Risk Assessment: Please see Highways England's response to Written Question DCO.2.65 [REP6-027] which explains that in the context of an FRA which, having considered the sensitivity of the locality, concludes that flood risk to and from the permanent features of the scheme from fluvial, surface water, groundwater and sewer flooding would be either low or negligible, and with drainage matters secured through Requirement 10, such a requirement is not necessary. Furthermore, in relation to an area of particular sensitivity in the area (around the B3803) the proposed scheme mitigations, as set out within the FRA and secured through Requirement 10, demonstrate a clear benefit to the B3083 where this highway is now removed from the floodplain. There is also a flood risk reduction north of the A303 crossing on the River Avon as a result of the proposed scheme.

Taken with the controls set out in the MW-WAT series of items in the OEMP, and the provisions of the protective provisions for the benefit of the EA and Wiltshire as LLFA, in built design mitigation will also be able to be approved, it is clear that this requirement is therefore not necessary or required.

In respect of all these matters, Highways England continues to discuss Wiltshire Council's concerns with them. Those discussions have been constructive, with a view to reaching agreement on appropriate solutions.

junction (which will include signal controlled crossing facilities for non-motorised users on each of the merge and diverge slip roads connecting A345 and A303). There is also little information about the traffic signals installation proposed at the Longbarrow junction, nor about how the proposed Pegasus crossing on the A360, south side of the Longbarrow southern roundabout, will be operated, especially as to how it will be linked (if at all) to the junction stop-line traffic signals. It is also unclear as to whether the Longbarrow traffic signals (which have been chosen to address road safety concerns about the chosen omission of street lighting at the junction) will be operational full time, or whether they will operate part time, e.g. dusk until dawn, during hours of darkness.

HE have indicated an intention [Deadline 4 submission - 8.33 Letter about the Applicant's intention to submit a request for proposed scheme changes - REP4-038] to modify the de-trunking plans to include the Countess roundabout as part of the de-trunked works; this will mean that the roundabout part of the junction will in future be maintained by Wiltshire Council, who will also have responsibility for the street lighting.

The Council and HE are currently seeking to secure a side agreement to the DCO which, inter alia, places the future responsibility with HE for maintaining the traffic signals controls at both junctions. Under the provisions of the draft agreement, HE will also have the controls over the signals timings with a view to ensuring the A303 mainline traffic is not adversely affected by any queuing at the junction; that agreement is not yet complete.

At the Issue Specific Hearing, during discussion about the cross-over arrangements at Longbarrow to be used during planned closure of one tunnel (and contraflow arrangements being put in place), there would be a need for temporary road lighting to be used for safety reasons; there has been no information included in any part of the submission, to the Council's knowledge, of what such lighting might comprise, and what impacts it might have. The Requirement sought will help to establish acceptable arrangements for both the permanent works and for planned maintenance when lighting will be

required.

The lighting required for the crossovers during tunnel closure may have direct impacts on sensitive receptors (residential property) in the vicinity of the Countess junction (which have not, to the Council's knowledge, been addressed as part of the considerations in relation to the Scheme), and is likely to include lighting on the A360 Longbarrow junction for traffic management at the Longbarrow end of the tunnels.

Although Part (4) of the suggested Requirement excludes 'where temporarily required for maintenance', the Council considers that such lighting of the crossover points will be routine, and part of a traffic management scheme to be used in order to allow for maintenance to be undertaken; it is therefore lighting for traffic management and not lighting for maintenance. The Council considers that lighting for maintenance should be exempted from the condition because of its variable nature, which might only be determinable 'on the job'. The Council would be happy, in order to clarify the condition, and to distinguish between lighting required directly or indirectly when maintenance is undertaken, to amend Part (4) to read:

(4) Nothing in this requirement restricts lighting of the authorised development during its construction or where temporarily required for directly lighting areas where maintenance is being undertaken.

As previously stated, the Requirement is similar in form to a Requirement included in the made DCO for the A14 Scheme in Cambridgeshire.

Traffic Management during Tunnel Closures

Regarding Traffic Management during Tunnel Closures, in its submission to Deadline 4, HE in their document Deadline 4 Submission – 'Appendix 2.2 Outline Environmental Management Plan (clean)', the following text was included at MW-TRA12:

Traffic Management during Tunnel Closures:

The main works contractor shall, prior to the handover of the works

to The Authority, prepare, in consultation with Wiltshire Council, a Tunnel Closure Management Plan (TCMP) setting out, inter alia, the following;

a) Procedures to be followed for the planned closure of a single bore, including use of temporary signing, and advance information proposals.

b) Procedures to be followed for unplanned closures of a single or both tunnel bores, either during or outside a planned closure, with particular reference to:

i. method of control of access to the eastbound or westbound or both merge slips at Longbarrow or Countess junctions respectively.

ii. Signage to be employed on the approved diversion route.

iii. Measures to be taken at a regional/sub national level to alert drivers of A303 delays.

iv. Requirements to liaise with Wiltshire Council's Streetworks Team and the police.

The text reflected earlier discussions between the Council and HE, and was included in good faith. However, on reflection, and in consideration of the following, the Council has sought to have the general principles enshrined in MW-TRA12 of the OEMP included instead as a Requirement:

a) The Requirement relates only to measures to be addressed after the opening of the tunnels, at a time when the contractor (who, under the OEMP would have responsibility for the discharge of the Requirement) will have limited interest in the traffic operations and management in the area. b) The Requirement has been recast so as to be in form such that it can meet the normal tests for a condition as set out in the NPPF.

c) The TCMP may be subject to changes, post works completion, which would be the responsibility for HE to address with the Council, after the contractor has no contractual relationship with the Scheme.

d) The positioning within the DCO of the Requirement would help

those who were seeking information about how the tunnel closures work, to find easier links to the TCMP, rather than having to seek out secondary and tertiary documents at some future date after the Scheme has been completed.

The Council has an on-going interest in the tunnel closures because of the use of the diversion route and the consequential implications for:

- i) the local communities through which the diversion route passes and
- ii) ii) the need to ensure that planned closures and works on the local roads network can be properly coordinated to ensure that delays are minimised for all road users.

Although planned tunnel closures are intended to be effected using contraflow in one tunnel whilst the other tunnel is closed for maintenance, during the traffic management set-up works, and removals processes, the diversion route is likely to be used for one-way A303 diverted traffic.

Flood Risk Assessment

The Council believes that this additional, separate Requirement is necessary given the flood risk sensitivity of the area. This wording proposed is similar to that which was included for the A14 scheme in its made DCO.

- ii. It is Wiltshire Council's view that HE should not be the body that both approves and implements the CEMP, as HE should not have final approval of a document written to implement their own Scheme. HE may have a vested financial interest in the cost implications of what might be rationale reasons for which the CEMP might otherwise be required to be e.g. amended in parts. The Council considers that HE should not be considered to be able to act with complete impartiality and objectivity.

The Council would support the Secretary of State acting as approving authority rather than the Authority (currently HE), to bring an independent sign-off element to the approval process. The Council

	considers that it could also undertake this role in its capacity as Local Planning Authority.	
3.4.21	<p>[In response to Fg.2.4]</p> <p>Wiltshire Council has reached agreement with the applicant on the peer review actions relating to the groundwater assessment. However, agreement has not yet been reached on the pluvial and road drainage actions.</p> <p>HE submitted a technical note (Appendix B) setting out their approach to the climate change allowances and exceedance routes. This has been reviewed by the Council's consultants, Atkins, and the latest comments / actions are outlined in the memo attached at Appendix C.</p>	Highways England understands that all outstanding technical matters raised in Appendix C of the Council's submission are now agreed between the parties.
3.4.22	<p>[In response to Fg.2.6]</p> <p>The Council believes that the Flood Risk Management Plan should be listed in MW-G7 of the OEMP and be developed in consultation with Wiltshire Council and the Environment Agency.</p>	The Applicant can confirm that item MW-G7 of the Outline Environmental Management Plan (OEMP) has been amended (within the updated OEMP submitted at deadline 6 [REP6-011]) to list the Flood Risk Management Plan as part of the Water Management Plan. The Applicant can also confirm that item MW-WAT12 has been amended within the updated OEMP to make reference to the Flood Risk Management Plan being developed in consultation with Wiltshire Council (in so far as relevant to its functions as lead local flood authority).
3.4.23	<p>[In response to Fg.2.13]</p> <p>Discussions with HE are ongoing to address the remaining peer review actions for road drainage and surface water. The outstanding actions relate to storm durations for hydraulic model runs and the operation of DTA1. Until the remaining actions are addressed, Wiltshire Council is unable to agree to full compliance with the NPSNN.</p>	<p>Section 4 of the updated FRA [REP3-008], Policy Context and Consultation, includes consideration of the Sequential and Exception Tests in the NPSNN. Section 4 of this document has not been changed since the original FRA was submitted to the Examination [APP-283]. In addition, these matters are considered in the Applicant's Case for the Scheme [APP-294], in Appendix A, Table 5, paragraphs 5.98 to 5.115. As nothing has changed in terms of flood risk, this review of flood policy including the Sequential and Exception tests in the NPSNN, and its conclusions relating to the Scheme, remain extant.</p> <p>The Council's peer review comments continue to be discussed and are expected to be resolved imminently.</p>

3.4.24	<p>[In response to Fg.2.18]</p> <p>Wiltshire Council accepts the Secretary of State as the approving body, provided the Council is consulted appropriately. However, Requirement 11 in its current form in the dDCO does not make adequate provision for consultation.</p> <p>The current wording does not require HE to provide Wiltshire Council with a copy of the consultation report, enabling the Council to see if it's response has been represented accurately. More importantly, it does not require HE to ensure that the Council's consultation responses are reflected in their submission, only needing HE to state their reasons for not including them.</p>	<p>The Applicant welcomes Wiltshire Council's confirmation regarding requirement 10.</p> <p>The Applicant amended requirement 11 at deadline 6 [REP6-006] to require a copy of the summary consultation report to be sent to the persons consulted. The Applicant considers that the legal duty to consult, which includes a duty to conscientiously consider responses is sufficiently developed for there to be no purpose to further spelling out how the Applicant should consider those responses. Further detail on the established legal principles is provided in the Applicant's response to Written Question DCO.2.63 [REP6-027].</p>
3.4.25	<p>[In response to Fg.2.29]</p> <p>Strengthening Requirement 7 as suggested in Fg.2.28 above would be supported.</p>	<p>Please see Highways England's responses to Written Questions Fg 2.28 and 2.29 submitted at deadline 6 [REP6-028].</p>
3.4.26	<p>[In response to Fg.2.31]</p> <p>MW-GEO1 currently refers to controlling risks to humans which the Council takes as including human health. The Council recommends extending protection of the environment which is supported by the CIRIA C741 publication.</p>	<p>Please see the response to item 6.1.4 within the Applicant's deadline 6 submission [REP6-034] which addresses this comment. In summary, the Applicant has made the requested amendment to measure MW-GEO1 of the OEMP at deadline 6 [REP6-012].</p>
3.4.27	<p>[In response to Fg.2.37]</p> <p>Wiltshire Council expects to be consulted on the Soil Management Strategy.</p>	<p>The OEMP has been amended at deadline 6 [REP6-011] (item MW-GEO3) to make clear that Wiltshire Council and the members of HMAG will be consulted on the Soils Management Strategy.</p>

	<p>The consultation with Wiltshire Council is also relevant in relation to the preparation of the Groundwater Management Plan, as it is the statutory authority leading on groundwater flood risk management.</p>	<p>Response provided at deadline 6 Flood risk, groundwater protection, geology and land contamination (Fg.2.22) [REP6-028].</p> <p>The updated version of the OEMP submitted at deadline 6 was updated to provide for consultation with Wiltshire Council on the Groundwater Management Plan as appropriate to their statutory functions. Other groundwater aspects are the responsibility of the Environment Agency. As noted above, specific monitoring proposals would be developed as part of the Groundwater Management Plan.</p>
3.4.28	<p>[In response to WM.2.8]</p> <p>In the interest of developing best practice for the placement of spoil and the development of chalk grassland on the arisings, Wiltshire Council's landscape and ecology teams should be consulted on the detailed methodology.</p>	<p>Wiltshire Council will be involved in the landscaping that will arise from the placing of arisings, pursuant to requirement 8 of the dDCO which requires the landscaping scheme for each part of the authorised development to be consulted upon with the Council - this will include the arisings area. Such a scheme is required to be based on the mitigation measures in the ES, which includes the OLEMP. That document sets out the initial proposals for how the chalk grassland will be created.</p>

4 National Trust (REP5-019 and REP6-062)

4.1	Response to the ExA's Second Round of Written Questions	
	Matter Raised	Highways England's Response
4.1.1	<p>[In response to CA.2.17]</p> <p>In addition to 1 and 2 Custodian Cottages, there is a further property at this location – 3/4 Custodian Cottages – which is in Trust ownership. We would expect these questions to apply equally to this property as to 1 and 2 Custodian Cottages.</p> <p>The Trust has the understanding that rights for permitted development within the curtilages of properties have been removed already within the Stonehenge part of the WHS, under the localised planning regimes already in force.</p>	<p>Please see response to Written Question CA.2.17 in the Applicant's Responses to the ExA's Second Written Questions regarding Compulsory Acquisition, Temporary Possession and Other Land or Rights Considerations [REP6-026].</p>
4.1.2	<p>[In response to DCO.2.14]</p> <p>See response to CA.2.3, CA.2.4, and DCO.2.37.</p> <p>Outside of this, the Trust does not seek any further drafting amendments to Article 7 in this regard. Should the LoDs be utilised to any extent, the mitigation measures for this will be appropriately controlled within the provisions of the DAMS, we would expect to see appropriate provision for consultation with the members of HMAG.</p>	<p>The Applicant welcomes National Trust's confirmation and is continuing to work with it to address its remaining concerns in respect of consultation with it and the members of HMAG. The Applicant remains of the view that consultation on the exercise of the limits of deviation is not appropriate, but notes the DAMS provides for consultation with the members of HMAG throughout the archaeological mitigation process.</p>
4.1.3	<p>[In response to DCO.2.18]</p> <p>The Trust's understanding is that within the WHS, haul roads will be contained within the footprint of the final construction, and there will be no creation of additional haul routes across the WHS. The OEMP [REP4-020] has a commitment (D-CH31) which satisfactorily addresses this issue.</p>	<p>The Applicant welcomes National Trust's confirmation that it is content that measure D-CH31 addresses this specific concern.</p>

	This comment (and others in this document relating to specific OEMP commitments and principles) is subject to any wider comment on the OEMP.	
4.1.4	<p>[In response to DCO.2.23]</p> <p>The Trust is still seeking greater clarity on the detail of survey and investigative work that is proposed under this authority and is working with the Applicant (including via HMAG) to further clarify this. In particular to ensure that any physically intrusive impacts are avoided where possible and appropriately mitigated where this cannot be achieved.</p>	<p>Please see the Applicant's response to DCO.2.22 [REP6-027] which confirms the measures required under the DAMS in respect of intrusive surveys and the OEMP in respect of other types of surveys, that would be authorised under article 15.</p> <p>The Applicant would like to note that the reference to paragraphs 5.2.43 to 5.2.44, in paragraph 1 of its response to DCO.2.22, ought instead refer to paragraphs 5.2.51 and 5.2.52 [REP6-014].</p>
4.1.5	<p>[In response to DCO.2.25]</p> <p>The Trust is content that any intrusions into the land within the WHS by Statutory Undertakers would be appropriately regulated by the OEMP [REP4-020] and the dDCO.</p> <p>The Trust does not consider that Article 22 or Requirement 4 require any drafting changes for these purposes.</p> <p>The Trust is content with the Applicant's post-hearing note within its DL4 written summary [REP-029] that the dDCO drafting means that a Statutory Undertaker exercising powers pursuant to Article 22 would be treated as the undertaker for those purposes and must therefore comply with the OEMP pursuant to Requirement 4 in connection with the works it undertakes.</p> <p>As such, the OEMP is clearly crucial to regulating any intrusions into the land within the WHS by Statutory Undertakers.</p>	<p>The Applicant welcomes the National Trust's confirmation that it is content with these matters.</p> <p>The Applicant agrees that the OEMP [REP6-011] is an important document in this regard and notes that the OEMP addresses utilities in measures PW-CH1 and MW-CH1 as part of the Heritage Management Plan, on which the National Trust, as a member of HMAG, must be consulted. In addition to those specific measures; MW-CH6 requires utility corridors to avoid significant archaeological remains, wherever possible, and implement appropriate archaeological mitigation measures in accordance with the DAMS, where impacts are unavoidable. This measure also requires the preparation of an SSWSI where service utility corridors cross archaeologically sensitive areas, as shown in Annex A.2. The National Trust is required to be consulted on the preparation of the SSWSI, which would be approved by Wiltshire Council, prior to the relevant work commencing.</p>
4.1.6	<p>[In response to DCO.2.26]</p> <p>See response to CA.2.4.</p>	The Applicant acknowledges the National Trust's response.

4.1.7	<p>[In response to DCO.2.37]</p> <p>Notwithstanding the latest updates to Section 4 at DL4 (including a suggested section which includes mechanism for consultation on some areas of detailed design), which has been a positive progression; adequate and comprehensive consultation on matters of detail across the scheme remains a key concern for the Trust.</p> <p>In so far as the WHS, the Trust believes that in addition to Historic England, and WCAS, both the National Trust and English Heritage hold important and relevant expertise which should be considered across a range of matters. This is why SCG too has an important role to play, one which should not be subjugated. Whilst SCG is tied into several facets of consultation, there remains an issue about unclear process and consistency in approach of consultation with the Heritage Stakeholders. This is true for both controls within the DAMS and the OEMP.</p> <p>The nature of resolution in cases of disagreement is an element of this discussion.</p> <p>We are working with the Applicant and the other Heritage Stakeholders to resolve this matter and to develop this within the OEMP and if necessary in side agreement outside of the OEMP.</p> <p>See response to CH.2.1.</p>	<p>The Applicant welcomes the National Trust's support for the general approach of addressing stakeholder design through section 4 of the OEMP [REP6-011]. Since deadline 6 the Applicant has had constructive discussions with the National Trust and other heritage stakeholders on the measures in section 4 of the OEMP. A workshop has been arranged with heritage stakeholders for shortly after deadline 7 to finalise section 4 of the OEMP.</p>
4.1.8	<p>[In response to DCO.2.40]</p> <p>The Trust is aware of the suggestion made by the ExA for guidance on design (referred to in De.2.2). This further detail is awaited from the Applicant and when received the Trust will comment upon it.</p> <p>If any further, post DCO confirmation approvals are required in respect of this design guidance, the Trust would seek the same level of involvement in that approval.</p> <p>See also response to DCO.2.37, De 2.2, and CH.2.1.</p>	<p>The OEMP was updated at deadline 6 [REP6-011] to include a design vision for the Scheme, to include further design principles and to update the approach to stakeholder consultation on design. As explained above, it is the OEMP that addresses the desire for more detail on design parameters.</p> <p>Since deadline 6 constructive discussions have been held with the National Trust and other stakeholders on these matters. The Applicant has arranged a workshop to be held shortly after deadline 7 with a view to finalising section 4 of the OEMP.</p>

4.1.9	<p>[In response to DCO.2.43]</p> <p>The Trust does still have outstanding concerns in relation to the amended OEMP submitted at DL4 and with the provision for consultation contained therein.</p> <p>We are working with the Applicant to address those concerns; and awaiting the version of the OEMP that the Applicant is due to submit at DL6, and will comment further in due course.</p> <p>See also response to DCO.2.37, De 2.2, and CH.2.1.</p>	<p>The OEMP was updated at deadline 6 [REP6-011] to include a design vision for the Scheme, to include further design principles and to update the approach to stakeholder consultation on design.</p> <p>Since deadline 6 constructive discussions have been held with the National Trust and other stakeholders on these matters. The Applicant has arranged a workshop to be held shortly after deadline 7 with a view to finalising section 4 of the OEMP.</p>
4.1.10	<p>[In response to DCO.2.45]</p> <p>We are awaiting the version of the OEMP that the Applicant is due to submit at DL6, and will comment further in due course.</p> <p>The Trust believes that the approval of the CEMP (and HEMP) is of sufficient importance that the Trust should have involvement as a key stakeholder in consultation on its formulation, monitoring, and amendment.</p> <p>See also response to DCO.2.18 and DCO.2.37.</p>	<p>Since deadline 6, constructive discussions have been held with the National Trust with a view to addressing its concerns.</p>
4.1.11	<p>[In response to DCO.2.51]</p> <p>The Trust is content that the OEMP as updated at DL4 does provide sufficient controls in respect of the design of the lighting scheme.</p>	<p>The Applicant welcomes the National Trust's confirmation.</p>
4.1.12	<p>[In response to DCO.2.52]</p> <p>i. We are awaiting the version of the OEMP that the Applicant is due to submit at DL6, and will comment further in due course.</p> <p>ii. See response to DCO.2.43.</p>	<p>The OEMP was updated at deadline 6 [REP6-011] to include a design vision for the Scheme, to include further design principles and to update the approach to stakeholder consultation on design.</p> <p>Since deadline 6, constructive discussions have been held with the National Trust and other stakeholders on these matters. The Applicant has arranged a workshop to be held shortly after deadline 7 with a view to finalising section 4 of the OEMP.</p>

4.1.13	<p>[In response to DCO.2.64]</p> <p>The Trust's concerns regarding the provision for consultation with relevant stakeholders and the means by whereby this would be secured remain. We are working with the Applicant to resolve this issue, and await the versions of both the OEMP and DAMS that the Applicant is due to submit at DL6, and will comment further in due course.</p> <p>See response to DCO.2.37.</p>	<p>Since deadline 6, the Applicant has had constructive discussions with the National Trust and other heritage stakeholders on the measures in section 4 of the OEMP [REP6-011]. A workshop has been arranged with heritage stakeholders for shortly after deadline 7 to finalise section 4 of the OEMP.</p>
4.1.14	<p>[In response to De.2.4]</p> <p>The Trust would request that it be consulted in respect of detailed design of Countess flyover.</p>	<p>Please see response to Written Question De.2.4 in the Applicant's Responses to the ExA's Second Written Questions regarding Design [REP6-023].</p> <p>Section 4.5.4 (b) of the OEMP submitted at deadline 6 [REP6-011] has been updated to include the flyover at Countess junction. This provides for consultation with the Stakeholder Design Consultation Group (SDGC) on this element. Section 4.5.2 of the OEMP lists the membership of the SDGC which includes the National Trust.</p>
4.1.15	<p>[In response to LV.2.6]</p> <p>The Trust seeks to be consulted on the Landscaping scheme prior to submission to SoS for approval.</p>	<p>Highways England assumes that the National Trust is referring to Requirement 8(2) of the draft DCO [REP6-005], which relates to the landscaping scheme (to be submitted under Requirement 8(1)) where it relates to works within the WHS or forming part of Work No. 4 – i.e. the works within the WHS and the principal work outside the WHS with the potential to affect the setting of the WHS. Highways England has drafted Requirement 8(2) so that the landscaping scheme for those areas is approved by the Secretary of State, following consultation with the planning authority and Historic England. Highways England considers this to be the appropriate level of consultation, reflecting the importance of the WHS and its setting. Further, the OEMP [REP6-012] section P-LE01 requires the planting strategy within the WHS to have due consideration to the objectives of the WHS Management Plan (where this does not conflict with ecological or visual mitigation).</p> <p>In addition, given the National Trust, unlike Wiltshire Council and Historic England, is not a statutory consultee, Highways England does not propose to</p>

		<p>include them in the consultation requirement. See also Highways England's Comments on any further information requested by the ExA and received at deadline 4 regarding the draft Development Consent Order [REP6-005], where it has responded at row 73 to the National Trust's suggestion that HMAG be consulted pursuant to Requirement 8.</p> <p>In any event, it is noted that with reference to the Outline Environmental Management Plan (OEMP) [REP6-011] the National Trust are included in the Stakeholders to be consulted on design elements, including fencing and surfacing within the WHS [OEMP ref: D-CH14], with OEMP Section 4 outlining that the Authority will continue to engage with key stakeholders through the development of the detailed design with paragraph 4.5.3 seq. outlining what matters will be consulted upon.</p>
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5 M & R Hosier (REP5-014, REP5-015 and REP5-033)

5.1	Comments on the Applicant's written summary of oral submissions made at ISH7	
	Matter Raised	Highways England's Response
5.1.1	<p>The summary has omitted to state what the "further submissions" actually were. For the Applicants reply to be taken in context, the "further submissions" referred to need to be included:</p> <ol style="list-style-type: none"> 1. The OEMP lacks reference to the full fledging cycle of Stone curlew chicks. There are no references that the chicks are totally reliant upon their parents to provide them food for up to 10 weeks after they leave the nest. Therefore the safety of the foraging parents and their chicks should to be built into mitigation. 2. The OEMP lacks reference to mitigation for the autumn roost, which is integral to the entire breeding cycle of the juvenile Stone curlews. <p>The OEMP does not state whether the ECoW or suitable qualified person will actually have understanding and experience of working with Stone Curlews.</p>	<p>Please see responses to 18.1.2, 18.1.3 and 18.2.40 in the Comments on any further information requested by the ExA and received at deadline 4 [REP5-003], where these issues are responded to.</p>
5.1.2	<p>The Applicants references that:</p> <p>"details of physical screening could not be provided at this point" and "it would be incorrect to give the impression that screens are committed to in every case"</p> <p>Due to the lack of inclusion of the above points, the OEMP PW-BIO5 and MW-BIO8 are considerably lacking in detail and do not provide adequate information to form assessment of whether provision or</p>	<p>Please see response to agenda item 3.4 in the Written Summaries or Oral Submissions regarding Biodiversity and Ecology at deadline 4 [REP4-035], where it was stated that "what is committed to (in the OEMP) is an appropriate response that is tailor-made for each particular circumstance". As any measures to be implemented during the construction phase of the Scheme are to be determined on a site by site basis (which could include screening, but that is not guaranteed as it may not be necessary at a particular location), following consultation with the RSPB and Natural England, it is therefore Highways England's view that appropriate, adequate</p>

	screening of construction works will be adequate for the Stone curlews.	measures are secured. It would be premature to prescribe measures within the OEMP at this point.
5.1.3	<p>Whether the proposed Development would prejudice the project to re-establish the great bustard as a resident breeding species in the area.</p> <p>Second paragraph, Ruth Manvell of GBG</p> <p>Missing comment on the contradiction that 40.3.25 states there are no Great Bustards in the scheme area, although Mrs Manvell had provided a map of breeding locations (this was confirmed by the Applicant's Ecologist) confirming breeding locations within the area. Mrs Manvell also stated that as far as she is aware, no work had been done by the Applicant to actually establish the presence of birds in the area.</p> <p>Third paragraph, Rachel Hosier</p> <p>Asked how appropriate mitigation could be put in place for Great Bustard when the Applicant has not carried out any surveys on the species and the species is being reintroduced, so few people have adequate knowledge.</p>	<p>Please see response to agenda item 4.2 and 4.3 in the Written Summaries or Oral Submissions regarding Biodiversity and Ecology at deadline 4 [REP4-035] and 18.2.30 in the Comments on any further information requested by the ExA and received at deadline 4 [REP5-003].</p> <p>Breeding bird surveys were undertaken in 2017 to inform the three options that were to be taken forward at the time (Options 1Na, 1Sa and 1Nd), the survey area of which included the current route option [APP-255]. The surveys broadly followed the Common Bird Census (CBC)¹ (Environmental Statement Chapter 8 Biodiversity, Table 8.8 [APP046] and consisted of a total of seven walked transects that were visited four times between April and July 2017. There were no specific surveys for great bustard.</p> <p>The information obtained from the Great Bustard Group on confirmed nest sites was used as a baseline and presented within Figure 8.11 Schedule 1 and Annex 1 bird species within 2 km of the Scheme [APP-157].</p> <p>The methods of the breeding bird survey followed current best practice and were agreed with both the RSPB and Natural England prior to commencing the survey, as stated in Table 8.5 of Chapter 8 of the Environmental Statement [APP-046].</p>
5.1.4	<p>Effectiveness of measures to secure long term management of calcareous grassland etc. to maximise gains in biodiversity.</p> <p>Missing comments from R Hosier</p>	<p>Please see response to agenda item 6 in the Written Summaries or Oral Submissions regarding Biodiversity and Ecology at deadline 4 [REP4-035] and 18.1.6, 18.2.32 and 18.2.33 in the Comments on any further information requested by the ExA and received at deadline 4 [REP5-003]. The area is to be managed to facilitate the movement of calcareous grassland invertebrates</p>

■ ¹ Gilbert , G., Gibbons, D.W. and Evans, J. (1998). Bird Monitoring Methods: A Manual of Techniques for Key UK Species. RSPB

	<p>That she doesn't understand why the land between the current A303 and the deep portal has to be taken out of M & R Hosier ownership, when they could retain the land and enter into a management agreement with the Applicant for the area instead.</p> <p>Asking what species are being targeted within this area and how a management plan can be put together for this area when the species being targeted have not been identified.</p> <p>That documents mention mowing as management for grassland, but mowing is highly destructive to invertebrate species and will act as a sink, destroying the very invertebrates the scheme is targeting.</p> <p>We have included these comments in M & R Hosier summary of our oral submission, yet they are omitted in the 8.30.7 written summary by the Applicant.</p>	<p>and floral species. The Scheme will contribute to the improved habitat connectivity identified as a priority in Natural England's Porton to the Plains project.</p> <p>The area between the current A303 and the portal is required to be under the ownership of The Applicant so that the land uses of adjacent land to the western approach cutting can be guaranteed and solely within the Applicant's control, i.e. the successful establishment and long-term management of essential chalk grassland mitigation for heritage and landscape reasons. This contrasts with the current land use in this part of the Scheme which comprises alternate arable cultivation and animal husbandry. If land within the DCO boundary to the north and south of the cutting is returned to these current uses (which is a possibility if this land was outwith the Applicant's control), the erosion from animal husbandry to the grassed earth slope at the top of the cutting will be readily visible as well as result in a substantial reduction to the concealment of the western approach cutting. It is therefore considered essential that land within the DCO boundary to the north and south of the cutting and across the land bridge should be chalk grassland and in the ownership of the Applicant and under its control and specifically be managed as chalk grassland.</p>
5.2	Written summary of oral submissions made at the compulsory acquisition hearing held on 9 July 2019	
	Matter Raised	Highways England's Response
5.2.1	<p>Whether development consent should be granted on areas required for or incidental to the proposed development such as areas required for landscaping/environmental management/mitigation;</p> <p>Save for the land required for the road carriageway and 'hard' infrastructure M&R Hosier are of the view there is no justification for the excessive use of CPO powers to acquire for the purposes of setting out land for ecological mitigation;</p>	<p>Please see the Applicant's response at item 40.1.7 in the document 8.18 Comments on Written Representations at deadline 3 [REP3-013], which states:</p> <p>The land identified for permanent acquisition around the tunnel has been reduced to the minimum required in order to construct, operate and maintain the tunnel. It does, however, include Limits of Deviation, within which the tunnel will be located following detailed design. Highways England will only acquire that land that is identified as required for permanent acquisition once the final detailed design is confirmed. With reference to the Environmental Masterplan [APP-059], some land has been identified for essential mitigation</p>

		around the tunnel to enable the portals to be set below ground levels or replicate ground levels as far as practicable and integrate the approach to the portals for landscape and visual integration, in combination with areas of new species rich chalk grassland for nature conservation and biodiversity.
5.2.2	<p>The inadequacy of the Promoting Authority to engage in any form of meaningful negotiations and whether they have met their obligations in accordance with Government Circular 06/04;</p> <ul style="list-style-type: none"> • Para 1.4.3 of the SoR states the applicant has attempted to acquire all interests in the land by agreement – can they confirm what those steps were? • Again para 4.11.3 of the SoR states the applicant has written to landowners informing them of the Applicant's willingness to negotiate and invite dialogue on this point. No such letter has been received by M&R Hosier and it is incumbent on the acquiring authority to manage this process • The table at 9.2 of the SoR sets out the current status of negotiations with each landowner. Page 9-60 is the page for M&R Hosier. Under the column "Status of Negotiations with land interest" it states: <ul style="list-style-type: none"> - "Negotiations have begun" – they haven't - "Looking to have an agreement in place during examination" - no such agreement has been released by the acquiring authority. 	<p>The Applicant has engaged, and sought to negotiate with, all persons affected by its proposed compulsory acquisition. The status of negotiations is set out in the Land Acquisition and Temporary Possession Negotiations Schedule [REP6-016], demonstrating that an initial letter was sent by the Applicant on 19/10/2018 stating that they would like to open negotiations about the acquisition of land. The agent for M & R Hosier did respond asking for further detail about the land required but a request for a proposed agreement was not forthcoming. The Applicant will look to enter into an agreement with the affected party if they are open to it; the Applicant is willing to discuss potential heads of terms in the first instance.</p>
5.2.3	<p>Although it is recognised that M&R Hosier will be compensated for the land required for the scheme there is no land available in the vicinity of their holding as the vast majority of the adjoining land is in the ownership of the National Trust or MOD. There will be no</p>	<p>The land that is required would be compulsorily acquired by the Applicant at market value, if compensation was not agreed. Detailed negotiations have yet to be concluded but if this money was to be reinvested in replacement agricultural land, there would be minimal long-term financial implications for the business.</p>

	<p>opportunity to claim for rollover relief to offset CGT liability, so this is another financial burden for the business to bear.</p>	<p>If suitable replacement agricultural land was not available, the money could be invested in other business (or investment) opportunities and would be likely to yield a similar financial return. Fixed costs of production would need to be scaled back slightly and this would take time to achieve.</p>
5.2.4	<p>The Promoting Authority has decided not to issue a Statement of Common Ground with landowners instead focussing its attention on statutory bodies some of whom do not have any interest in the land. M&R Hosier believes there has been poor stakeholder engagement despite being part of the scheme as owners of the land. Statutory stakeholders such as Natural England (NE), National Trust (NT), English Heritage (EH), Wiltshire Council, within this scheme, have dual roles of both consultees and overseeing and feeding into scheme. As such it has become apparent that farm landowners and other non- statutory stakeholders are at a disadvantage. There are no legacy benefits within the scheme for farmers, only for these organisations. As such this scheme has not been impartial.</p>	<p>Please see response to agenda item 8.1 in the Written Summaries of Oral Submissions made at the compulsory acquisition hearing held on 9 and 10 July 2019 and submitted at deadline 5 [REP5-002]; please refer in particular to the submissions on page 2-24, which refer to the Applicant's Land Acquisition and Temporary Possession Negotiations Schedule (updated version submitted at deadline 6 [REP6-016 and REP6-017]), providing information on the list of engagement activities that the Applicant has undertaken with M&R Hosier.</p> <p>Additionally, it has been made clear to landowners that the Applicant is willing to prepare Statements of Common Ground ('SoCGs') with any landowners that would wish to submit them to the application and have been working on Position Statements in a similar format with landowners to enable these to be transferred into and submitted as SoCGs, if the landowner wishes this. As set out on page 2-25 of the Written Summaries of Oral Submissions made at the compulsory acquisition hearing [REP5-002]:</p> <p>"Mr Richard Turney explained that Highways England has developed position statements with landowners and some landowners have confirmed their preference for these to be converted into Statements of Common Ground and included in the examination's written submission process. This is acceptable to Highways England. If requested by Mr Mole or his clients, the position statements could be turned into Statements of Common Ground and submitted to the examination."</p> <p>While statutory bodies have particular responsibilities that must be taken into consideration, there has been extensive consultation inputting to the Scheme's development and Highways England has been careful to balance all considerations, including those of farm landowners and other non-statutory parties, in developing the optimum solution. Moreover, Highways England is keen to pursue legacy benefits for all, including the farming community.</p>

		<p>The Scheme itself will remove congestion from the A303 and rat-running traffic from local roads, making it easier for farmers to use the network and access their land.</p> <p>Over and above the benefits that the Scheme will bring simply through being constructed, Highways England is also pursuing funding for initiatives where legacy opportunities present themselves. Current examples which have farming representation include:</p> <ul style="list-style-type: none"> - active partnering with the World Heritage Site Partnership Panel over developing strategies for sustainable transport, tourism and land access consistent with the aims of the World Heritage Site Management Plan; and - pursuit of a biodiversity strategy which will explore priorities for species and habitats in the area. <p>While the legacy work is still at an early stage (as much of it will follow the DCO process if development consent is granted for the Scheme), Highways England is committed to seeking wider benefits for all and will be happy to continue engaging with the farming community to seek their ideas in the pursuit of this agenda.</p>
5.2.5	<p>Inappropriate use of S172 powers for survey purposes</p> <p>The timings of intrusive and non-intrusive surveys have not taken into account farming calendar and farming practices despite these being discussed on numerous occasions with the applicant and their consultants. M&R Hosier and their tenants were forced to move pigs early only for the applicant failing to carry out work on the area due to pig dung.</p> <p>In addition there was an inappropriate intention for using byway to provide access for surveys during winter months when the byways were severely pot- holed and not suitable for vehicular traffic without causing significant damage.</p> <p>Twice the Promoting Authority has sought to force access to M&R Hosier's land under S172 of the Housing & Planning Act 2016, once using these powers and a recent attempt which fell</p>	<p>Please see response to agenda item 8.1 in the Applicant's Written Summaries of Oral Submissions made at the Compulsory Acquisition Hearing held on 9 and 10 July 2019 which were submitted at deadline 5 [REP5-002 at page 2-24]. Please also refer to response items 40.4.10 and 40.4.11 in the Applicant's document 8.18 Comments on Written Representations [REP3-013], which states:</p> <p>"Highways England's preferred method for gaining access to land is through agreement with the relevant landowners. Highways England provides each landowner the opportunity to enter into an agreement and negotiate terms of access. If agreement cannot be reached, Highways England has the ability to gain access to land through the exercise of its statutory powers. In the case of the A303 Scheme, in order to prevent delay to programmed timescales, notices have been served under Section 172 of the Housing and Planning Act 2016 which confers power on Highways England to enter and survey or value land in connection with a proposal to acquire an interest in or a right over</p>

	<p>away due to a late agreement being reached.</p> <p>There are two major concerns with this approach:</p> <ul style="list-style-type: none"> • In the event the landowner is not willing to engage (which has never been the case here) S172 is the wrong power to use. S53 of the Planning Act 2008 was specifically created for this purpose. Why has the Authority chosen not to use this specific powers? • The onus is on the Promoting Authority to demonstrate it has made all reasonable attempts to secure access by agreement and the use of CPO powers is a last resort. They have categorically failed and have resorted to use S172 to preserve their programme. This is plainly wrong and an abuse of CPO powers. 	<p>land. As such, Highways England considers that its use of the power in section 172 was necessary, timely and appropriate.</p> <p>“The farming calendar has been accounted for when preparing for all intrusive and non-intrusive surveys. In relation to moving the pig unit this was required to allow archaeology investigations of the West Portal and Tunnel approach. It is not correct that the archaeology work was not carried out due to pig dung, as trial trenching was carried out in the former pig unit. Unfortunately, it was not possible to carry out hand sieving of the topsoil due to human health reasons.”</p>
5.2.6	<p>A lack of preparation by consultants for first archaeological surveys in 2016 led to damage to scheduled monument SM10317 due to repeated tracked excavator refuelling, a pig death, animal welfare issues and unreported damage to farm property.</p> <p>M&R Hosier experienced various issues with bags of archaeological finds left on site. Poor reinstatement works after surveys with numerous metal pins left on site, some having caused damage to their machinery.</p>	<p>With regard to access for surveys, Highways England has consulted and continues to fully consult with the landowner. Access points and routes are agreed before each survey and pre and post-condition surveys are carried out for all intrusive survey works along the access and works areas. Highways England will continue to manage survey works with farming activities and landowner preference where possible.</p> <p>Furthermore, no scheduled monuments have been damaged as a result of Highways England's surveys. The Applicant is aware that unsubstantiated allegations of damage to scheduled monument Bowl barrow known as 'Bush Barrow' and to two-disc barrows south east of Normanton Gorse forming part of Normanton Down round barrow cemetery (NHLE 1009618) have been made; however, Highways England strongly refutes the allegation that damage was caused by survey work carried out in connection with the Scheme. The scheduled monument was inspected by Historic England and no further action was taken by them.</p> <p>All other matters, from the Applicant's perspective, were dealt with in a respectful and open manner during on-site discussions with the land owner at the time of the surveys and resolved as far as possible, including suitable compensation paid where required.</p>

		The Applicant has also responded on these points in its Comments on Written Representations [REP3-013], paragraphs 40.4.10-40.4.13.
5.3	Responses to the ExA's Second Round of Written Questions	
	Matter Raised	Highways England's Response
5.3.1	<p>WQ Ag.2.10</p> <p>Response to item i)</p> <p>We remain unconvinced that the Applicant has a correct interpretation and understanding of the hydrogeology and structural geology of the Scheme area. This is noted in our response to 8.18 items [REP4-092] 40.1.16, 40.5.10, 40.5.15, 40.5.18 in relation to water, and items 40.1.20, 40.1.21, 40.1.25, 40.1.26, 40.1.28, 40.1.29, 40.1.31, 40.1.34 in respect of soil protection. If the Applicant remains unwilling to revisit these areas from negotiations with the NFU, then we fail to see how an ALO will be of significant benefit.</p> <p>Also see our responses within report 8.31 [section 9, REP4-036].</p>	<p>With regard to water, please see paragraph 5.3.3 below where detailed water issues have been raised.</p> <p>There is sufficient detail for the purposes of the Environmental Statement and consideration and determination of the application. Land access arrangements will be made for future ground investigations which would be carried out for detailed design purposes by agreement or through the powers proposed within the dDCO [REP6-005].</p> <p>The OEMP submitted at deadline 6 [REP6-011] includes a number of provisions in relation to soil, including amendments to the role of the ALO.</p>
5.3.2	<p>WQ Ag.2.10</p> <p>Private water supplies</p> <p>In the 8.31 (Applicants response 8.18 to our Written Representation), under their paragraph 40.1.15 the Applicant refers to the pig enterprise having been "taken into account within the OEMP". We have responded asking for the reference to this as we have not been able to locate it. Please also refer to our comments on lack of feasibility studies to provide either temporary or permanent water to our farm should our borehole supply be compromised.</p>	<p>The measures for the protection of water supplies (and contamination of them) set out in the OEMP [REP6-011] and the Road Drainage Strategy [APP-281] will enable uncontaminated water supply to continue for businesses (such as the Hosier's pig enterprise) throughout the construction and operational periods.</p>

5.3.3

WQ Ag.2.10

OEMP measures

OEMP item MW-GEO2

As we have stated in our responses, there is a need for all water abstractors to be notified if there is any groundwater contamination incident on site as there is the potential for this to enter the groundwater that is drunk by farm tenants and livestock.

OEMP item MW-WAT5

Pollution incident monitoring. There is no noting that any “actual significant pollution incidents” will be reported to any private water abstractors for them to monitor their water supplies or seek to take remedial action.

OEMP item MW-WAT8

What will happen if the Scheme needs dewatering and the Environment Agency (EA) do not agree to this due to the fact that the level of dewatering is significantly more than has been identified within the groundwater risk assessment? Will this just go ahead and all private water abstractors will be provided with an alternative supply?

OEMP item MW-WAT10

From independent research we remain concerned that the main works contractor will be relying on the survey works and their interpretation carried out by the Applicant, which we believe to be inaccurate.

There is no requirement to monitor the water quality levels for drinking water standards, therefore there is the potential for private water abstractors to ultimately be drinking contaminated water as only chemical components will be picked up.

There is no noting of how often the water monitoring will take place. If only carried out quarterly or monthly, there is the possibility that water could be contaminated for a period of time before the issue is

Please refer to the response provided to the Examining Authority’s Written Questions submitted at deadline 6 [REP6-028, Question Fg.2.2]. There are a number of controls in relation to pollution incidents. For example:

MW-GEO8 of the OEMP [REP6-011], confirms the measures required to prevent cross contamination from stockpiled materials, and to protect buried services, drainage runs and groundwater source protection zones from potential ingress of contaminants. MW-GEO6 requires contractors to control potential hazardous substances in line with COSHH guidance; MW-WAT4 requires a spill response procedure and pollution incident control plan; MW-WAT6 requires the contractor to establish measures to prevent deposition of silt or other material in any watercourse, lake or aquifer, in accordance within industry guidelines; and MW-WAT7 requires contractors to carry out handling of contaminated material treatment processes and storage that does not affect the chalk aquifer.

As stated within Table 2.1 of the OEMP [REP6-011], the role of the Agricultural Liaison Officer (ALO) is to communicate with landowners and occupiers running agricultural businesses likely to be affected by the Scheme, including in relation to drainage issues. Should a significant pollution incident occur the ALO would inform any potentially affected landowners.

OEMP item MW-WAT8

With regard to dewatering, please refer to the response provided to the Examining Authority’s Written Questions submitted at deadline 6 [REP6-028, Question Fg.2.33].

The Applicant considers that the approval/permitting procedures set out in the OEMP and secured by requirement 4 of the draft DCO [REP6-005] are sufficient to ensure any required dewatering is adequately controlled.

Please also refer to The Environment Agency’s response to the Examining Authority.

Furthermore, as stated within item MW-COM6 of the OEMP [REP6-011] where an existing private water supply to a farm is adversely and directly affected by the construction of the Scheme, the main works contractor shall, if

picked up. If this was to be the case, people and livestock would be drinking contaminated water.

OEMP MW-WAT11 We believe that, as it cannot be proved that the Scheme will not impact on the quality and quantity of water from private borehole abstractions, the Applicant needs to have alternative water supplies already in place prior to the Scheme going ahead. Independent research has shown that alternative water supplies can take as long as 18 months to 2 years to put in place and it would be unreasonable for the Applicant to rely on temporary water supplies over that length of time.

No mention is made of what this “appropriate monitoring” will be and whether farmers will be consulted, to ensure that what is proposed is actually “appropriate” for their farm circumstances. Will water be monitored to drinking water inspectorate standards if people are drinking the borehole water?

We note that main works contractors will consult with existing abstractors for measures to minimise loss or interruption of supply, provision of emergency water supply, and provision of alternative permanent water supplies. However, there is no mention of when this consultation will take place. These elements need to be discussed now, as they may have a bearing on the Scheme.

Point a) states “Where determined, and agreed with the owners /operators or other abstraction licence holders, targeted risk-based audits and checks of water quality monitoring will be undertaken at abstraction sources by the main works contractor”

Who will “determine” whether these water quality monitoring will be carried out? Will farmers be able to request this monitoring? Will quality monitoring be to drinking water standards or to standards required by farm assurance schemes? Will farmers be provided with a copy of the results so they can provide evidence at farm assurance schemes audits? How soon will information be provided to farmers?

requested by the farmer or landowner to do so, provide or procure or meet the reasonable cost of the provision of an alternative supply.

OEMP item MW-WAT10

The Groundwater Management Plan proposed at item MW-WAT10 of the OEMP [REP6-011] includes monitoring which will be secured through the dDCO. The detail of monitoring and mitigation will be discussed with Wiltshire Council and the Environment Agency.

As stated within Table 2.1 of the OEMP [REP6-011], the ALO will liaise with owner/occupiers to establish measures to be implemented to maintain livestock water supplies which may be affected due to construction works.

With regard to groundwater sampling protocols, in its response to item 9.6.1 and 9.6.4 in the Comments received to deadline 3 [REP4-036], Highways England confirmed that its groundwater samples have been compared to the UK Drinking Water Standards (see paragraph 3.10.2 of [APP-282] and Table 3.6). Highways England is not assessing whether the water is fit to drink for water users or proposing to take on the role of the Local Authority or the Drinking Water Inspectorate (DWI) with regard to Private Water Supplies but will continue to compare groundwater quality samples with drinking water standards as part of the Groundwater Management Plan proposed at item MW-WAT10 of the OEMP [REP6-011]. This is sufficient for the protection of the groundwater resources upon which the private water supplies rely.

OEMP MW-WAT11

The Applicant recognises the importance of maintaining water supplies to those landowners which rely on sources which could potentially be affected by the Scheme.

The OEMP [REP6-011] contains specific items (MW-WAT11 and MW-COM7) which contain measures to minimise and reduce potential adverse impacts on abstraction boreholes and to ensure temporary or permanent water supply is maintained. These measures are considered standard practice for schemes of this nature and are typical of requirements placed on contractors constructing such schemes. It is therefore not considered necessary to undertake a feasibility study of providing water (should this be required).

Point a) continues “The period of monitoring will be appropriate to the timing and type of work undertaken, and will include a period of baseline monitoring”.

Realistically, there is no way of knowing what is an “appropriate period of monitoring”, so we would suggest that this is carried out as frequently as possible. No mention is made of when the baseline monitoring would start. To provide a representative for baseline quality and supply, monitoring should be undertaken as soon as possible and we would suggest that it should already be happening.

The Applicant is relying on water models for the flow of water within the area, but there is no certainty that these will be accurate. The Applicant believes there to be no karstic behaviour of the rock within the area, but if this is incorrect as we believe, then the water flow within the area will be quicker than anticipated, so contamination incidents would show up sooner. Having not carried out any 3 D modelling of the Scheme to show fissure flow, how can the main works contractor or even any landowners etc, properly assess where these monitoring boreholes should be accurately placed within the landscape?

Point b) of MW-WAT11 states “the main works contractor will arrange any monitoring of water levels in areas where dewatering of the chalk aquifer is required”

The location of the monitoring will depend on how much water will be abstracted by dewatering. If there is a large volume of water to be abstracted then this could potentially have a large drawdown area within the landscape. We believe that the Applicants water model needs to be backed up by a full fracture 3D model to show the extent of fractures within the geology, which will accurately inform where these additional water monitoring points should be and provide more information to assess the dewatering needs of the Scheme on the chalk aquifer.

Point c) of MW-WAT11 states “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

Further, item MW-COM6 provides a process for alternative water supplies to be put in place.

Highways England confirms that its groundwater samples have been compared to the UK Drinking Water Standards (see paragraph 3.10.2 of [APP-282] and Table 3.6). HE is not proposing to take on the role of the Local Authority or the Drinking Water Inspectorate (DWI) with regard to Private Water Supplies. The Drinking Water Inspectorate (DWI) is the competent authority for ensuring the Drinking Water Directive requirements are met in England & Wales. It provides independent reassurance that public water supplies in England & Wales are safe and drinking water quality is acceptable to consumers.

Modelling has been carried out at an appropriate scale to simulate the effects of the Scheme on regional groundwater flow and sensitive receptors. The modelling has been reviewed and considered appropriate by the Environment Agency and Wiltshire Council’s peer reviewers.

This model has been refined in the area of the tunnel with aquifer property data from pumping tests and preferential flow horizons have been considered using geological, geotechnical and geophysical data.

Groundwater Monitoring 2018-19 Conceptual model review [AS-019] considered monitoring data against the conceptual understanding and related groundwater model setup. The monitoring data supports the conceptual model and shows the model simulates groundwater levels in the areas of new groundwater level data well.

Groundwater level trends are typical of Chalk aquifers and do not suggest there are specific fracture controls on flow to private supply boreholes. With regard to dewatering, see response above with respect to MW-WAT8. The Environment Agency will not licence abstraction for dewatering unless it can be demonstrated that there are no significant effects on receptors.

OEMP MW-WAT15

Monitoring would not be decided upon by the Contractor alone. The Groundwater Management Plan proposed at item MW-WAT10 of the OEMP [REP6-011] includes provision for monitoring which is secured through

(licence holder and operator) and will put in place appropriate emergency measures to overcome the adverse impact where this has resulted from the construction works”

Whilst we understand that measures will only be put into place as a result of a construction works impact, the chances of any water quality issues deviating from the baseline monitoring as result of any other incidents, is negligible. We are concerned that rather than notify us of a water quality issue, an attempt will be made to dismiss the polluting incident as being agricultural and therefore no remedial action will be taken. It could take months or even years to establish the cause of a pollution incident which in the meantime, leaves farms and cottages with only contaminated water to drink. This is unacceptable.

As already mentioned in the points above, there should be an alternative water supply available prior to the commencement of construction of the Scheme. The final connection to this alternative supply could then be quickly made.

Point c) continues “these emergency measures may include the transfer of a potable water supply to another water source and informing the water users.”

We would suggest that the wording “supply to another water source” should actually read “supply or another water source”.

There is a need for the main works contractor to make provision for any potable water (presumably in the form of tankers) to access our farm and discharge the water into our farm water network. A tanker of water delivered to the farm entrance alone is not sufficient. As already noted, there is a considerable amount of work that needs to take place prior to the Scheme construction to ensure farm water supplies are secure.

We would hope that we would be informed of any suspected problems as soon as it has become apparent so we are able to stop tenants and livestock drinking contaminated water.

OEMP MW-WAT15

requirement 4 of the DCO. The detail of monitoring and mitigation will be discussed with Wiltshire Council and the Environment Agency.

The Applicant further notes that it is a Groundwater Management Plan that is required, which means not only dealing with monitoring, but outlining how groundwater resources are to be protected in a consistent and integrated matter, updating the Groundwater Risk Assessment for the final design and the derivation of trigger levels and action levels with regards to exceedances and accidents and incidents.

Modelling has been carried out at an appropriate scale to simulate the effects of the Scheme on regional groundwater flow and sensitive receptors. The modelling has been reviewed and considered appropriate by the Environment Agency and Wiltshire Council’s peer reviewers.

This model has been refined in the area of the tunnel with aquifer property data from pumping tests and preferential flow horizons have been considered using geological, geotechnical and geophysical data.

With regard to the potential for drainage from abstraction to cause contamination, MW-GEO8 of the OEMP, confirms the measures required to prevent cross contamination from stockpiled materials, and to protect buried services, drainage runs and groundwater source protection zones from potential ingress of contaminants.

MW-GEO6 requires contractors to control potential hazardous substances in line with COSHH guidance; MW-WAT4 requires a spill response procedure and pollution incident control plan; MW-WAT6 requires the contractor to establish measures to prevent deposition of silt or other material in any watercourse, lake or aquifer, in accordance within industry guidelines; and MW-WAT7 requires contractors to carry out handling of contaminated material treatment processes and storage that does not affect the chalk aquifer.

Potential impacts on water supplies will be mitigated through the implementation of measures included within the Outline Environmental Management Plan (OEMP) [REP6-011] (at references PW-WAT1 and WAT2, and MW-WAT1, WAT2, WAT3, WAT4, WAT5, WAT6, WAT7, WAT9, WAT10,

Groundwater, this states, “ 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”.

We understand that this makes the main works contractor responsible for carrying out additional surveys should it be shown that there is a need for dewatering or there is evidence that the tunnel constructed within the water table is having a greater than anticipated effect on the groundwater flow. We believe that this is putting too much responsibility on the main works contractor. It is the Applicant as the purveyor and supporter of the Scheme who should be responsible for fully assessing the structural geology and hydrogeology of the Scheme prior to works commencing. As such, we believe the Applicant needs to carry out a full 3 D fracture model of the Scheme to make the contractors tendering for the work fully aware of all potential problems.

MW-WAT15

continues “Water levels at selected observation piezometers will be monitored before, during and after any dewatering associated with the construction of the tunnel”. By carrying out a 3D fracture model it will show where the observation piezometers need to be placed within the Scheme to be able to provide an accurate representation of what is occurring in the groundwater.

In addition to this, we note that some of the monitoring boreholes (that have been constructed on our farm last October with a view to providing baseline information prior to construction), have yet to have any monitoring equipment installed. We would suggest that the Applicant is failing in its duty to carry out adequate base line monitoring for which the groundwater levels will be assessed. This has the potential for the main works contractor to base assessments on insufficient information leading to errors.

MW-WAT15

WAT14, and WAT15), which is secured through paragraph 4 of Schedule 2 to the draft Development Consent Order [REP6-005].

MW-COM6

The Groundwater Risk Assessment [APP-282] considers the tunnel as a permanent feature within the Chalk aquifer. It found no significant effect on groundwater levels at private supply boreholes.

The modelling approach was scrutinised by the Environment Agency and Wiltshire Council's peer reviewers who suggested additional model runs to test the findings of the Groundwater Risk Assessment. These model runs also found no significant effects on groundwater levels [REP3-021].

Consequently, the modelling has been considered appropriate by the Environment Agency and Wiltshire Council's peer reviewers.

Given the above points and the low risk of adverse effects on private water supplies, it is not considered proportionate for Highways England to provide a preconstruction alternative water supply.

concludes that “additional drainage will be provided as mitigation where necessary. Monitoring arrangements will be in defined within the groundwater management plan.” What happens if the EA does not permit additional drainage within areas? And what measures will be put in place to ensure that water discharge areas are not going to contaminate the groundwater? Much of the land within the Scheme area is livestock farmed, so will carry additional contamination risks as organic matter has the potential to be washed into groundwater with the large volume of discharge water. There is the potential for farmers to be blamed for groundwater contamination due to livestock production rather than the practices of the main works contractor who is water discharging in inappropriate locations.

MW-COM6

states: “Private water supplies: Where an existing private water supply to a farm is adversely and directly affected by the construction of the Scheme” This only refers to the construction of the Scheme, it does not take into account any problems that will arise in the groundwater as a result of the tunnel being present within the geology, blocking water flow. This has the potential for devastating long term consequences on our farming business. Wording needs to be changed to include the presence of the tunnel within the groundwater.

“the main works contractor shall, if requested by the farmer or landowner to do so, provide or procure or meet the reasonable cost of the provision of an alternative supply of water (at the contractor’s option)” We suggest that the cost of providing an alternative water supply for all

abstractors needs to be assessed prior to the Scheme construction, as this has the potential to be a considerable cost which would need to be built into any contractors tender. We believe that the Applicant should undertake assessment of costs relating to provision of alternative water supplies and not leave this to the main works contractor. We believe that the alternative supply of water should be in place ahead of Scheme work commencing,

as it would take potentially 18 months to 2 years to construct an alternative water network. Studies will need to be carried out to ascertain whether Wessex Water has the capacity to add large farms onto the existing mains network, with a suitable water pressure that the farms can operate with no adversity. Should a mains supply be chosen, then on a like for like basis, farmers should not pay for the water they use. Who will pay for the farmers' water usage? Will it be the main works contractor or will it be the Applicant?

"Where the supply is affected temporarily by the construction of the Scheme, then the alternative supply need only be supplied for the period during which it is affected." Temporary water provision will also need considerable assessment by the main works contractor as it is not sufficient for a tanker to be delivered to a farm. The means by which the potable water is transferred by the tanker into the farm water network is important, as is year round access to the farm water network.

"Where a request is made by the farmer or landowner for a permanent supply due to permanent severance of the existing supply caused by the construction of the Scheme" Similar to the first paragraph in MW-COM6, this does not take into consideration the severance of fissures within the geology that supply water to our borehole, ie fissures that are either blocked by grout, or blocked by the physical presence of the tunnel itself. Additional wording is required to take this into account.

"the main works contractor shall, where provision of an alternative means of supply can be demonstrated by the landowner/farmer to be reasonably required for his business, provide or procure or meet the reasonable cost (at the contractor's option) of a permanent means of alternative supply of water". We would add that the supply of water would be on a like for like basis, ie at no added water meterage costs and at a similar water pressure as existing water supply, if a mains water connection is decided. We also believe that this alternative supply is in place prior to any Scheme works taking place and is undertaken in consultation with our farm water engineers so they are

	able to facilitate the design process with their knowledge of the existing water network.	
5.3.4	<p>WQ Ag.2.10</p> <p>Geology and soils</p> <p>OEMP item MW-GEO3</p> <p>Notes that a soils management strategy will be produced by the main works contractor. Will the respective farmers be provided with the sections of this report that relates to their farms, where the land will be returned? Will farmers and their agents be part of the discussions relating to these areas on their farms?</p> <p>OEMP item MW-COM8</p> <p>We note that the Record of Condition survey will be provided along with sectional drawings and photographs to the landowners. It does not say when the record will be carried out or supplied. Past experience has shown that we are not provided with any information until months after it has been completed.</p>	<p>The Soils Management Strategy, as part of the CEMP, will be a document and, as such, will be publicly available.</p> <p>The OEMP submitted at deadline 6 [REP6-011] was amended to include provision for Preconstruction Soil Statements for individual land holdings that will be temporarily occupied during the construction of the Scheme (refer to items PW-COM2 and MW-COM4). These statements shall provide a baseline schedule of soil condition against which the restoration of the soil will be assessed and shall include the incorporation of information gathered from the Record of Condition surveys. As stated within Table 2.1 and items PW-COM2 and MW-COM4 of the OEMP, the Agricultural Liaison Officer shall coordinate pre-construction soil surveys and liaise with landowners / occupiers regarding restoration works.</p>
5.3.5	<p>WQ Ag.2.10</p> <p>Impact on pig enterprise</p> <p>The surveys cannot guarantee that there will not be a negative impact on our water supply. Therefore, if the Applicant fails to install an alternative water supply prior to the construction, they are in effect manipulating the situation so that the pig enterprise will no longer be able to operate on our farm. The risk to animal welfare where there is the potential for breeding sows to be without water for an unknown period of time will not comply with the pig assurance schemes required by the contractual agreements for consumers. Even reducing sow numbers, there is still a large element of risk in relation to water supply, as well as the enterprise running at an uneconomic production level.</p>	<p>Please see response issued at deadline 5 – 8.36 Comments on any further information requested by the ExA and received at deadline 4 paragraph 18.2.3 [REP5-003], addressing (inter alia) concerns raised in relation to the maintenance of water supplies during the construction of the Scheme.</p>

	<p>For the above reasons we believe that the Scheme will inevitably lead to the pig enterprise leaving our farm, being forced into this situation by the Applicant's Scheme.</p> <p>We are of the opinion that a lot of the uncertainty within the Scheme could be lessened by the Applicant having a 3D fracture model produced of the Scheme area at this stage eg Golders Fracman. This would advise contractors who are tendering for the Scheme.</p> <p>We also believe that the suggestions we have made for inclusion within the various OEMP items would help to mitigate the impact on the pig enterprise.</p>	
5.3.6	<p>WQ Ag.2.10</p> <p>Part ii)</p> <p>The Applicant states that they cannot be completely certain that there will not be an issue with ground water as a result of the tunnel construction, and once the Scheme is in operation. However, the Applicant has not provided a percentage value for this risk to groundwater. Therefore, we are unable to fully assess the impact the Scheme will have upon our farming business and plan any strategies to reduce this risk.</p> <p>From our independent assessments, there will be a considerable lead in time for infrastructure to be put in place for both temporary and permanent alternative water supplies. With this in mind, together with a requirement to ensure that Animal Welfare issues are not encountered, we believe an alternative water supply (be it a temporary water storage facility with access connected to our existing water network, or a borehole or mains supply) needs to already be in place prior to the Scheme commencing. When circumstances require this alternative water supply to be used, the final connections between the new and existing infrastructure could be made within a 24 hour period to restore supplies.</p> <p>Alternative water supply should be on a like for like basis, ie:</p>	<p>See response to agenda item 5.1 in the oral submission report from ISH4 [REP4-032]. Highways England, as the Scheme promoter, is responsible for ensuring that groundwater resources, including the supply and quality of groundwater, are protected during the construction and operation of the Scheme. Potential impacts on water supplies will be mitigated through the implementation of measures included within the Outline Environmental Management Plan (OEMP) [REP6-011] (at references PW-WAT1 and WAT2, and MW-WAT1, WAT2, WAT3, WAT4, WAT5, WAT6, WAT7, WAT9, WAT10, WAT14, and WAT15), which is secured through paragraph 4 of Schedule 2 to the draft Development Consent Order [REP4-018]. As set out in the Environmental Statement, Chapter 11, Road Drainage and the Water Environment [APP-049], section 11.9, the assessment shows no significant changes to hydrology, private water supply, surface water quality or groundwater quality (water supply) during either the construction or operational phases of the Scheme. Highways England has been working with and will continue to work with Wessex Water and other statutory utility providers as required to ensure that water supplies are protected during the construction and operation of the Scheme.</p>

If this is to be mains water, this would be at no extra cost to farmers. Under abstraction licenses, we do not pay for the amount of water we draw, so we would not pay for any mains water usage or connection charges.

Alternative supply should also be to the similar water pressures that our current network operates to. Provision of a supply with less pressure will not reach the far ends of the farm rendering it useless.

We believe there is a requirement for the Applicant to carry out a 3d fracture model of the Scheme area as soon as possible, as this will provide the main works contractor with information for any potential problems that will be incurred with the tunnelling. The problems, be they groundwater or structural, can then be solved before they are encountered, ensuring the Scheme timetable is met.

A lot of responsibility is being placed on the Main Works Contractor, who has not been involved in any of the scheme surveys, so has not had the opportunity to feed in or comment. The Main Works Contractor seems to be responsible for: MW-GEO3 (Soil Management Strategy) MW-WAT2 (Producing Water Management Plan) MW-GEO20 (Emergency Preparedness and Readiness Response Plan) MW-WAT4 (Response Plan and Pollution Incident Control Plan) MW-WAT12 (Flood risk Management Plan) MW-MAT1 (Site Waste Management Plan) MW-WAT2 (Materials Management Plan) MW-COM8 (Record of Soil Condition).

We would like to know what responsibilities the Applicant will be retaining within the Scheme as proposers and supporters of the Scheme.

6 Stonehenge Alliance (REP5-021 to REP5-024 and REP6-063 to REP6-065)

6.1	Comments on REP4-036	
	Matter Raised	Highways England's Response
6.1.1	<p>As of July 19th 2019, an inadequate understanding of present groundwater conditions exists along the proposed A303 road and Stonehenge tunnel route.</p> <p>The groundwater conditions and any sound prediction of changes are significantly incomplete in and around the route of the proposed A303 Stonehenge tunnel and associated highway works.</p> <p>This is demonstrated by the continuance of drilling of a considerable number of further boreholes by Highways England contractors, together with the current situation of incomplete instrumentation and monitoring of existing observation boreholes.</p>	<p>Investigations currently taking place on site are not being undertaken to inform on-going assessment of the impacts of the Scheme but are to enable the detailed design of the Scheme to proceed as efficiently and expeditiously as possible if the DCO is granted. They are not required for the purposes of consideration of groundwater impacts. Monitoring is on-going at groundwater monitoring locations for establishing the most up to date pre-construction baseline scenario.</p> <p>There is sufficient understanding of groundwater conditions for the purposes of the environmental statement and consideration and determination of the application.</p> <p>Please see response to 34.1.74 in the deadline 5 – Comments on any further information requested by the ExA and received at deadline 4 which explains that there is local monitoring at Blick Mead as described in the monitoring report [AS-015]. Piezometers are installed at different depths in the key area of interest.</p> <p>Further monitoring is not required to support the Environmental Statement as explained in the deadline 1 Submission - Blick Mead - Note regarding proposals for additional monitoring [REP1-007]. This monitoring and catchment-wide Chalk aquifer groundwater monitoring has led to the development of a conceptual model and Tiered Assessment. The reliability of the conceptual model has reached an acceptable level and has been verified by monitoring [AS-019].</p> <p>During the ISH2 hearing it was confirmed that Highways England has followed the required guidance from Historic England in the production of the Blick Mead assessment, Historic England further confirmed this at the hearing, noting also that the assessment conducted was adequate [REP4-</p>

		030, 8 iii]. A Tier 4 assessment is only required where mitigation is considered necessary to facilitate long-term preservation. As no significant effects were identified, no mitigation is necessary and therefore additional tiers of investigation and modelling are not required.
6.1.2	<p>The Whitway Rock (known to the east of the Salisbury area and in the SW of the Devizes BGS 1:50,000 geological map as the Stockbridge Rock) has not been identified in either phase of the site investigation work for the proposed Highways England A303 Stonehenge road and tunnel scheme.</p> <p>The Stockbridge Rock is referred to by Mortimore et al (2017, page 8):</p> <p>“It is also possible that the hardground equates with the British Geological Survey Stockbridge Rock Member mapped on the Salisbury Sheet (Hopson, 2005). The Stockbridge Rock Member is a hard bed several metres below Barrois’ sponge bed. It is localised within a part of the Wessex basin controlled by syn-sedimentary faulting/folding along the line the Winchester-Dean Hill anticline (Fig. 2).”</p> <p>This significant hard 5 metre thick limestone horizon, commonly lying some 5 or so metres below the Seaford/Newhaven Chalk horizons boundary, appears to act as an “underdrain” to the upper unconfined Chalk aquifer horizons in this area.</p> <p>The background to the Wessex Basin Groundwater Model and associated work, adopted by Highways England and the Environment Agency, is detailed by Soley et al. (2012). It is stated that the initial work carried out in advance of the Wessex Basin and associated groundwater modelling activities prior to 2012 was informed by a comprehensive 3-D ground model of all these areas, carried out by the British Geological Survey (BGS).</p> <p>Using groundwater modelling nodes (as utilised in ModFlow software, and similar) with 250m spacings, only about 15 data points</p>	<p>Please see responses to item 11.1.1 and 11.1.3 in the Comments on any Further Information at deadline 4 [REP5-003].</p> <p>Modelling has been carried out at an appropriate scale to simulate the effects of the Scheme on regional groundwater flow and sensitive receptors. The modelling has been reviewed and considered appropriate by the Environment Agency and Wiltshire Council’s peer reviewers.</p> <p>This model has been refined in the area of the tunnel with aquifer property data from pumping tests and preferential flow horizons have been considered using geological, geotechnical and geophysical data.</p>

	<p>are established to predict groundwater conditions along the tunnel line.</p> <p>This poor level of detail is totally inappropriate and insufficient to investigate the complexity of groundwater movement, recharge, flow and discharges at the necessary scale and detail requirements of the 3.3km long tunnel.</p>	
6.1.3	<p>The creation of any degree of groundwater barrier, as a result of tunnel construction, could affect local private abstractors, and even the discharge of the Blick Mead/Amesbury Abbey springs to the east.</p> <p>It is highly likely that the Blick Mead and nearby Amesbury Abbey spring system arises from a sub- crop of the Whitway Rock to the west of Countess Roundabout.</p> <p>There is therefore grave concern about long term effects due to potential changes in horizontal and vertical permeabilities of such zones as the Whitway Rock, the overlying Upper Seaford Chalk/Newhaven Beds, and fracture systems which control groundwater flow southwards below Stonehenge Bottom, respectively.</p> <p>It is therefore essential that additional, deeper, targetted and cored borehole drilling is carried out, especially to the east of Stonehenge Bottom, as far as Countess Roundabout. This would enable proper investigation of geological and hydrogeological conditions at depth, below the proposed tunnel soffit level. Such boreholes would assess the presence or absence of the Whitway rock in the area of the Scheme and if present, its hydrogeological significance, especially in the eastern section of the Chalk that is likely to be affected by tunnel construction and operations.</p>	<p>Please see response to item 11.1.3 in the Comments on any Further Information at deadline 4 [REP5-003] which explains that a conservative approach to modelling has been undertaken to simulate the effects of the Scheme on regional groundwater flow and sensitive receptors.</p> <p>The model has been refined in the area of the tunnel with data from pumping tests and preferential flow horizons have been considered using geological, geotechnical and geophysical data. It is therefore considered that the approach to modelling is robust and sound.</p> <p>Furthermore, [REP3-018] Figure 2 shows the stratigraphic position of the Whitway Rock if it were present in the area. It would be situated largely above the tunnel profile and therefore would not have a significantly different effect on groundwater levels compared to the effects described in the Groundwater Risk Assessment [APP-282].</p> <p>See also the Environment Agency response to the potential presence and location of the Whitway Rock in REP4-049, paragraph 1.2.3, which recognises that this unit has not been mapped in the area and if present is expected to be above the tunnel elevation.</p>
6.1.4	<p>Paragraph 11.1.1</p> <p>Topic: Obligations under World Heritage Convention</p> <p>1. Highways England asserts that its position as set out in detail in its response to WQ G.1.1 (REP2-021) is that the WH Convention has</p>	<p>Please see response to item 11.2.25 in the Comments on any Further Information at deadline 4 [REP5-003].</p> <p>With respect to paragraph 2, Highways England has had regard to all relevant articles of the World Heritage Convention, and its submissions as set out in</p>

	<p>been implemented in the UK by the State Party and that there are consequently appropriate and effective measures in place for the protection of WH Sites.</p> <p>2. Highways England has, however, failed to take note of the definition of “cultural heritage” in Article 1 of the Convention, which relates simply to cultural WHSs and not cultural heritage in general, and has thus failed to comprehend the wording of the Convention in respect of the requirements of Article 5, in particular that the SP agrees to</p> <p>(a) “adopt a general policy which aims to give the cultural and natural heritage a function in the life of the community and to integrate the protection of that heritage into comprehensive planning programmes” and</p> <p>(d) “take the appropriate legal, scientific, technical, administrative and financial measures necessary for the identification, protection, conservation, presentation and rehabilitation of this heritage”</p>	<p>response to Written Question G.1.1 [REP2-021], the Applicant's Written Summaries of oral submissions at Cultural Heritage Issue Specific Hearings (ISH2) [REP4-030] (specifically Agenda Items 3(i), 3(v), 3(vi) and Appendix A to that document), and its response to Stonehenge Alliance in REP5-003, are very clearly focussed on WHSs and the ways in which the Convention (including the requirements of Article 5) has been implemented by the UK with respect to WHSs. The policy framework in the UK protects cultural heritage generally and includes specific provisions in relation to WHSs.</p>
6.1.5	<p>3. It cannot be said that the UK Government is unable to institute such protection or pretend that it has undertaken to fulfil these obligations “as far as possible” and “as appropriate” (Convention, Article 5).</p>	<p>Please see response to items 11.2.25 and 11.2.26 in the Comments on any Further Information at deadline 4 [REP5-003], the Applicant's response to the Examining Authority's Written Question G.1.1 [REP2-021] and the Applicant's Written Summaries of oral submissions at Cultural Heritage Issue Specific Hearings (ISH2) [REP4- 030] (specifically Agenda Items 3(i), 3(v), 3(vi) and Appendix A to that document).</p>
6.1.6	<p>4. The UK Government has no general policy which aims specifically to protect its WHSs and allows protection of WHSs to be integrated into comprehensive planning programmes, such as the A303 Stonehenge scheme. Nor has the Government adopted the legal measures necessary for the “protection, conservation, presentation and rehabilitation of this heritage”.</p> <p>The only steps HMG has taken relate to heritage assets generally; it does not rate</p> <p>protection of the WHS above planning protection for any other designated heritage assets of the highest significance apart from</p>	<p>Please see response to items 11.2.25 and 11.2.26 in the Comments on any Further Information at deadline 4 [REP5-003], the Applicant's response to the Examining Authority's Written Question G.1.1 [REP2-021] and the Applicant's Written Summaries of oral submissions at Cultural Heritage Issue Specific Hearings (ISH2) [REP4- 030] (specifically Agenda Items 3(i), 3(v), 3(vi) and Appendix A to that document).</p>

	<p>Scheduled monuments and Listed buildings which, unlike our WHSs, do have Statutory protection.</p> <p>5. Indeed, it is this lack of specific protection for its WHSs and the inadequacy of the UK planning system to adapt to the special requirements re development in UK WHSs that has enabled the Government to promote the A303 Stonehenge Scheme and occasioned the deep concern of UNESCO's WH Centre and WH Committee in recent years. The Stonehenge, Avebury & Associated Sites WHS is not alone in this respect. Other examples, seen in reports to and Decisions of the WH Committee in 2019, are:</p> <p>i) Liverpool Mercantile Maritime City WHS (on the List of WH in Danger and threatened with removal from the WH List next year): "The current planning regime is not adequate to protect the OUV of the property." (2019 Report to WH Committee);</p> <p>ii) Cornwall and West Devon Mining Landscape WHS (threatened with "in danger" listing next year): "Current planning tools, policy documents, approval processes and consultation timeframes do not sustain the protection of the OUV of the property." (2019 Report to WH Committee); and</p> <p>iii) Palace of Westminster and Westminster Abbey including St Margaret's Church WHS. "The cumulative impacts on this World Heritage property, especially from high rise developments with strong visual impact, combined with the difficulty to challenge planning permissions and currently inadequate management is a threat to this property . . .". (2019 Report to WH Committee).</p>	
6.1.7	<p>6. It is obvious that the WH Convention is not being fully implemented by HMG and that there are, consequently and contrary to Highways England's assertion, insufficient "appropriate and effective measures in place for the protection of world heritage sites."</p>	<p>Please see response to items 11.2.25 and 11.2.26 in the Comments on any Further Information at deadline 4 [REP5-003], the Applicant's response to the Examining Authority's Written Question G.1.1 [REP2-021] and the Applicant's Written Summaries of oral submissions at Cultural Heritage Issue Specific</p>

		Hearings (ISH2) [REP4- 030] (specifically Agenda Items 3(i), 3(v), 3(vi) and Appendix A to that document).
6.1.8	7. Furthermore, the “planning balance envisaged in the NPSNN” referred to by Highways England relates only to balancing harm against public benefit in domestic planning policy, while no such planning balance is envisaged in Article 5 of the Convention.	Please see response to items 11.2.25, 11.2.26 and 11.2.32 in the Comments on any Further Information at deadline 4 [REP5-003], the Applicant’s response to the Examining Authority’s Written Question G.1.1 [REP2-021] and the Applicant’s Written Summaries of oral submissions at Cultural Heritage Issue Specific Hearings (ISH2) [REP4-030] (specifically Agenda Items 3(i), 3(v), 3(vi) and Appendix A to that document).
6.1.9	8. The ICOMOS Guidelines, which Highways England has employed in its HIA of the impacts of the Scheme on the OUV of the WHS allows a balancing exercise only where the public benefit is involved. Highways England has undertaken a balancing exercise of positive and negative impacts on attributes of OUV and has made no case for the scheme on the basis that the irreparable damage it would do to the WHS could be offset by fully quantified public benefits.	Please see response to item 11.2.31 in the Comments on any Further Information at deadline 4 [REP5-003], and the Applicant’s Written Summaries of oral submissions at Cultural Heritage Issue Specific Hearings (ISH2) [REP4- 030] (specifically Agenda Items 3(i), 3(v), 3(vi) and Appendix A to that document).
6.1.10	9. Contrary to Highways England’s assertion and in view of the July 2019 Decision of the WH Committee, it appears that a decision to grant consent for the A303 Stonehenge Scheme would “lead to the UK being in breach of its international obligations pursuant to the World Heritage Convention.”	Please see response to item 11.2.25 in the Comments on any Further Information at deadline 4 [REP5-003], the Applicant’s response to the Examining Authority’s Written Question G.1.1 [REP2-021], and the Applicant’s Written Summaries of oral submissions at Cultural Heritage Issue Specific Hearings (ISH2) [REP4- 030] (specifically Agenda Items 3(i), 3(v), 3(vi) and Appendix A to that document).
6.1.11	<p>Paragraph 11.1.2</p> <p>Topic: Rejection of 4.5 kilometre Tunnel Option</p> <p>Highways England have still failed to provide a proper response as to why the 4.5 kilometre tunnel option was rejected. They refer to the appraisal of alternatives in Chapter 3 of the Environmental Statement. This simply states “the three route options within Corridor D incorporating the 4.5km tunnel had costs significantly in excess of the available budget for the Scheme and these options were</p>	Please see the Applicant’s response to the Examining Authority’s Written Question AL.1.29 [REP2-024]. In summary, the locations of the eastern and western portals in the proposed Scheme have been identified as the optimum locations when all environmental, technical and economic considerations are taken into account. There is no evidence that the additional investment required to extend the tunnel length would deliver meaningful additional benefits to the WHS that would justify the additional cost.

	<p>therefore not considered further”1. The remainder of the response relates to the claimed benefits of the recommended solution and its funding case. This is irrelevant to consideration of whether a different option would perform better in an overall appraisal.</p> <p>It appears that an arbitrary decision was made to reject any option with a higher cost than the 2.9 kilometre tunnel options, regardless of whether they would create greater benefits. Given that the tunnel length has increased to 3.3 kilometres and the cost has escalated, this decision appears very questionable. It also seriously undermines Highways England’s claims that a thorough assessment of alternatives was undertaken.</p>	
6.1.12	<p>11.1.3</p> <p>Topic: Traffic Impacts of Option F010</p> <p>Highways England’s response on this point is concerned mainly with defending the traffic modelling against the statement that it “is not very robust”. The fact that it shows zero traffic on the A3086 eastbound in the Do Minimum, or in either direction with the Corridor D options is strong evidence that the modelling is not robust. Clearly there is potential for debate as to whether it was appropriate and proportionate for the stage of project development at which it was used. We could have greater confidence if a back check had been conducted using the final DCO model to confirm that similar results were produced.</p> <p>Highways England have not responded to the substantive points that Option F010 represents an improvement relative to the Do Minimum situation and is less likely to be subject to rat running. They refer to comments made in relation to Agenda Item 8 of Issue Specific Hearing 6, when they mean Agenda Item 7. These do not provide any new information. This issue is considered further in response to Para. 11.1.4.</p>	<p>Please see the Applicant’s response to the Examining Authority’s First Written Question AL.1.11 [REP2-024] which summarises the interpretation made explaining the merits of the F10 route relative to the tunnelled options.</p> <p>As the response notes, the appraisal of alternative options including F010 was undertaken in accordance with the Department for Transport’s (DfT) Web-based Transport Analysis Guidance (WebTAG) and Early Assessment and Sifting Tool (EAST) with consideration of the National Policy Statement for National Networks (NPSNN). It is important to note that the robust assessment of the alternatives was undertaken across many different measures and criteria; these are detailed in the Technical Appraisal Report (TAR) [REP1-031] and summarised in the TAR Appraisal Summary Tables (AST) [REP1-038]. Stonehenge Alliance appears to suggest that the Option F010 route has been rejected on traffic grounds alone. This is a misrepresentation of the large body of evidence that is presented in the TAR (and outlined in the Applicants response to AL.1.11) which clearly highlights the significant environmental issues associated with F010 (including ‘Very Large Adverse’ impacts on the landscape, ‘Very Large Adverse’ impacts on the Upper Avon Narrow Chalk River Valley, and ‘Large Adverse’ impacts on the Larkhill and Winterbourne Chalk Downland and Till Narrow Chalk River Valley Landscape Character Areas).</p> <p>By focussing solely on the traffic impacts of F010 the Stonehenge Alliance is misrepresenting the reasons as to why F010 was rejected for further consideration and misconstrues the options selection process.</p>

6.1.13	<p>11.1.4 Topic: Economic Appraisal of Alternatives</p> <p>There are several strands to Highways England's argument on this issue. Relevant points are quoted below together with our response.</p> <p>1. "F010 route would not interact effectively with the local road network and would result in higher levels of rat-running traffic, adversely affecting the quality of life in local communities".</p> <p>Highways England's own modelling shows the forecast levels of traffic on the local road network are not very high and that they would reduce with Option F010 (Technical Appraisal Report, Figures 10.2 to 10.5).</p> <p>Rat running is not defined by Highways England. In principle this could cover two impacts:</p> <ul style="list-style-type: none"> • drivers regularly selecting an alternative route to avoid predictable congestion, and • spontaneous re-routing to avoid unexpected delay due to incidents or day to day variation in traffic volumes. <p>The first impact should be included in the modelling, which shows that Option F010 would reduce flows. Highways England claim that improved journey time reliability is a key benefit of the project, thereby reducing any incentive to rat running due to unexpected delay. In any case, Option F010 takes the A303 further away from communities such as Larkhill and Shrewton, making it less likely that the route through them would be used for rat running. We have made this point previously and not received any response. Accordingly we do not agree with the above quotation.</p>	<p>As per our response to item 6.1.12 above, the Applicant notes that Stonehenge Alliance is seeking to pursue a course that misrepresents the selection procedure for F010 by presenting traffic issues as the central argument. As we have noted above, this ignores the significant environmental grounds on which the Scheme was rejected.</p> <p>With respect to the traffic-specific point that Stonehenge Alliance makes here, paragraphs 20-22 of our response to the Examining Authority's First Written Questions AL.1.11 [REP2-024] explain why the F10 route would interact less effectively with the local route network. <i>"The longer distance and alignment of F010 make this option less attractive for local movements than D061 / D062 and it is more likely that trips making local movements, including HGVs, will use the local roads north of the A303". This impact would represent an adverse effect to quality of life in local communities.</i></p>
6.1.14	<p>2. "Tables 11-9 and 11-10 of the Technical Appraisal Report (TAR) [REP1-031] compare the monetized benefits and costs used to calculate the initial BCR for the options."</p> <p>This shows similar Benefit: Cost Ratios for all three options so does not give a strong indication that one should be preferred over another.</p>	<p>Please see response to item 55.1.7 in the Comments on Written Representations Report submitted at deadline 3 [REP3-013] which explains that a full options appraisal was carried out for the A303 Scheme; and sets out the multi-faceted reasons why F010 was not taken forward.</p>

6.1.15	<p>3. “In assessing value for money, a range of non-monetized cost and benefits are also taken into account. It is the value-for-money assessment along with contribution to client scheme requirements that are used for to assess options which meet the Client Scheme’s requirements and objectives of the Scheme”.</p> <p>Option F010 is located wholly outside the World Heritage Site and this should be considered as a non-monetised benefit. While there may also be disbenefits associated with F010 it is not at all clear that they would outweigh its advantages.</p> <p>In relation to the Client Scheme Requirements, the assessment is summarised in Table 9.1 of the Technical Appraisal Report. This marks down Option F010, from “Strong” alignment with the requirement to “Moderate” alignment, relative to the other options in relation to transport and economic growth, apparently on the basis that the journey time benefits are forecast to be slightly lower. It is very questionable if this is justified. The tunnelled options are considered to have a “Moderate” alignment with the Cultural Heritage requirement, despite their impact on the World Heritage Site. Stonehenge Alliance considers this to be over generous to these options. We would also question why the overall ranking of F010 is lower on the Environment and Community requirement, given that a major part of this Client Scheme Requirement is “to contribute to the enhancement of the historic landscape within the WHS”.</p> <p>Given this, we are not confident that the assessment was conducted objectively and we consider that Option F010 should have been taken forward to public consultation.</p>	<p>Please see response to item 55.1.7 in the Comments on Written Representations Report submitted at deadline 3 [REP3-013] which explains that a full options appraisal was carried out for the A303 scheme; and sets out the multi-faceted reasons why F010 was not taken forward.</p> <p>The response to first written question AL.1.13 [REP2-024] explains that while acknowledging the benefits to the WHS of option F010, the TAR concluded [REP1-31 para 22.1.5] that, on balance, Route Options D061 and D062 would deliver a better fit against the relevant local and national planning, transport and economic policy objectives, than Route Option F010, and thus they would achieve the Scheme objectives (which derive from Client Scheme Requirements) more effectively.</p>

6.1.16	<p>4. “The calculation offered by Stonehenge Alliance for a surface route option is based on a crude indication of costs, is limited to some of the monetised benefits and excludes non-monetised benefits and costs. It does not provide a balanced view and cannot therefore be relied on to judge the merits of such an option.”</p> <p>We agree that the estimate of costs that we provided for a surface option is crude, although we consider that it is realistic in relation to the estimated cost of Option F010 and the outturn cost of other projects. We were not seeking to provide a full assessment of the costs and benefits of a surface route through the World Heritage Site, which would clearly have totally unacceptable impacts. Instead, as we clearly stated, the purpose of the assessment was to compare the monetised transport benefits of the project with an estimated cost for a surface option. This clearly showed that it would not provide good value for money even if the special conditions of the World Heritage Site did not apply.</p>	<p>We agree that a surface option through the Word Heritage Site would be unacceptable. Detailed modelling work is only undertaken for route options that clearly demonstrate they would be acceptable in meeting the Client Scheme Requirements.</p> <p>It would not be proportionate use of resources to engage in modelling options that do not exist in the real world – such as options where the special conditions of the World Heritage Site did not apply.</p> <p>The route has been modelled using appropriate techniques and concludes the Scheme will deliver benefits that outweigh the costs.</p>
6.1.17	<p>11.1.5 Topic: archaeology along the route options</p> <p>Comments by Kate Fielden</p> <p>Highways England has at no stage provided evidence to demonstrate that largely unknown archaeological remains that may exist on the line of the F010 route can be compared on equal terms with the known archaeology of the preferred route. Any archaeological remains along the F010 route might, potentially, relate to attributes of OUV of the WHS but, being outside the WHS boundary, they would not contribute to its OUV. The recent Decision by UNESCO’s World Heritage Committee includes the words:</p> <p>“Notes with concern, that although the current scheme, which is now subject to the Development Consent Order (DCO) examination process, shows improvement compared with previous plans, it retains substantial exposed dual carriageway sections, particularly those at the western end of the property, which would impact adversely on the Outstanding Universal Value (OUV) of the property, especially its integrity, and therefore [the Committee] encourages the</p>	<p>Please see response to item 3.1.17 in the Comments on Written Representations Report submitted at deadline 3 [REP3-013] which explains that although the F010 route is sited beyond the WHS boundary, the boundary was drawn at the time of inscription to follow existing roads, land boundaries and the River Avon and does not relate to the extent of significant archaeology that may contribute to the OUV of the WHS; the F010 route lies within the setting of the WHS and therefore could directly impact as yet unidentified archaeological remains that relate to the OUV of the WHS.</p>

	State Party to not proceed with the A303 route upgrade for the section Amesbury to Berwick Down project in its current form” (Decision 43 COM 7B.95 (4 July 2019)).	
6.1.18	<p>11.1.6 Topic: Variable Demand Modelling</p> <p>Stonehenge Alliance has previously expressed concern that the coefficients in the Variable Demand Modelling element of the model have not been made available. Our initial concern was that model coefficients calibrated over the whole of the South West Regional Traffic Model area might not accurately represent the responses of users of the A303 at Stonehenge. From the response provided by Highways England, we now understand that calibration was undertaken at a national level. This only increases our concerns about the relevance of the model coefficients for this project.</p>	Please see the response to item 6.2.7 below.
6.1.19	<p>11.1.7 Topic: extent of area modelled in detail</p> <p>In their response, Highways England state firstly that “The eastern boundary of both the South West Regional Traffic Model and the A303 Stonehenge SWRTM (DCO) models extends to the M3 Junction 4 near Frimley” and subsequently that “the point where the network performance is fully modelled ends on the M3 south of Basingstoke”. As Basingstoke is approximately 14 miles west of Frimley, the boundary of the area of detailed modelling should be clarified.</p>	As expressed in section 3.1 of Highways England’s Summary of Oral Submissions note [REP4-034], the eastern boundary of the A303 Stonehenge SWRTM (DCO) model extends to the M3 Junction 4 near Frimley.
6.1.20	<p>They acknowledge that approximately 35% of traffic using the A303 near Stonehenge also uses the M3 near Farnborough. This is a very significant proportion of total traffic on the route and shortcomings in the way this is modelled could be significant in relation to forecast traffic flows on the route near Stonehenge. We comment further on this in our comments on Highways England’s Summary of Oral Representations made at the Public Hearing on June 13th.</p>	Please see the response to item 6.2.3 below.

6.1.21 11.1.8 Topic: Traffic master Data and Distribution of Delays

We are pleased that Highways England agrees with us that the average journey time on the fastest day “provides a reasonable estimate of the time required to traverse the route in reasonably uncongested conditions.” However we remain concerned that this does not provide a reasonable basis on which to base an assessment of the number of days on which significant problems occur. As stated previously, it is unrealistic to expect any road that carries significant volumes of traffic to experience free flow conditions throughout the year. The absence of free flow conditions is not, in itself, sufficient to demonstrate the need for intervention. In order to provide greater clarity on this issue, it would be helpful if Highways England could set out the average journey time for each day of the year. This would promote an informed debate about the definition of severe congestion and the number of days when it is experienced.

Highways England misrepresent the Stonehenge Alliance’s position by claiming that we have stated that all the user time savings generated by the scheme are imperceptibly small. In fact our actual statement was “Highways England also refer to Table 5-3 of the Combined Modelling and Appraisal Report (COMMA), which states that 55% of the time saving benefits relate to business trips.

Unfortunately Highways England does not quote the distribution of journey time savings for business travellers, so we cannot be confident that a high proportion of them are not generated by imperceptibly small journey time reductions for a large number of trips.” The traffic model simulates journey time changes across major roads throughout South West England. The project may result in large changes in journey times on the A303 near Stonehenge on peak summer weekends, when relatively few business trips are being made. But it will also result in very small, probably imperceptible, changes on many roads on weekdays throughout the year. Our point was not that all changes would be imperceptible, but we do not know the contribution that very small changes make to the total claimed user benefit to business travellers. If Highways England

Please see the response to item 6.2.9 below which responds to the point raised regarding the average journey time on the fastest day.

In respect of user time savings, section 6.6.2 of the economic package [APP-602] explains that the journey time savings predominantly derive from around two to three minutes (in the opening year) for through A303 traffic, with larger savings on busy days. These changes in journey time are not ‘imperceptibly small’.

Table 5-3 of the Combined Modelling and Appraisal report [APP-298] shows that the value of time savings for business travellers are assessed to be £205m (£180m for car and LGV plus £25m for goods vehicles). These business user benefits comprise:

- £56m where the scheme would reduce journey times by more than 5 minutes
- £153m where the scheme would reduce journey times between 2 and 5 minutes
- -£4m where the scheme would reduce journey times of less than 2 minutes or increase journey times

As is directly evident from the journey times savings delivered by the Scheme, the time savings predominantly accrue from journeys where travel times reduce by more than two minutes.

	produced an analysis showing the distribution of time savings for business and non-business travellers (as is required in Scotland) then we would know. Instead of doing this, they have chosen to resort to misrepresentation of our position.	
6.1.22	Highways England further misrepresent Stonehenge Alliance's position by claiming that we "assert that the Scheme is a bad investment from a partial consideration of only one particular objective." Our argument is that the quantified analysis does not support the argument that the project is important for the economic development of South West England. The benefits of the project to business only represent 19% of its costs, so that purely from a business perspective it is a bad investment. We fully accept that these are not its only impacts and other factors – both monetised and non-monetised – should be taken into account in making an overall assessment of the project.	<p>The Applicant acknowledges and agrees with the Stonehenge Alliance position that both monetised and non-monetised impacts should be taken into account in making an overall assessment of the investment case for the project.</p> <p>The A303 is one of the two main road routes from London to South West England; it is the trunk road corridor between London and Penzance and provides the most direct road link between the southwest peninsula and London and the South East. Despite its strategic importance to the South West region, the route is of poor quality, experiencing considerable congestion and road safety problems, and is seen as an extremely unreliable access point to the South West. The A303 Amesbury to Berwick Down scheme delivers significant transport benefits with reduced travel times and improved journey time reliability which will be a benefit to businesses in the South West.</p>
6.1.23	<p>11.2.1 Topic: Funding Availability</p> <p>The statement by the Permanent Secretary of the Department of Transport, quoted by Highways England to support their contention that funding is available includes the following "we will make a strong case for these schemes [A303 Stonehenge and Lower Thames Crossing] to be funded in addition to the RIS 2 envelope but, clearly, that will be ultimately a matter for determination in the spending review." Given the numerous pressures on Government finances and BREXIT uncertainty, it is far from certain that this will be accepted.</p>	The Applicant reiterates its response to Written Question CA.2.13 [REP6-026], that the Government remains publicly and clearly committed to fund the Scheme.

6.2	Comments on Applicant's written summaries of oral submissions made at ISHs [REP4-029 to REP4-035]	
	Matter Raised	Highways England's Response
6.2.1	<p>Issue Specific Hearing 3: Landscape and Visual; and views REP4-009–017 requested under WQ LV.1.9(i)</p> <p>Agenda item 4. ENVIRONMENTAL STATEMENT CHAPTER 7 – ASSESSMENT METHODOLOGIES</p> <p>v. Range of photomontages and choice of receptors</p> <p>1.1. Highways England agreed at the ISH to look at the possibility of providing montages and dynamic views, including 360-degree visualisations and some additional views suggested by Interested Parties. In the event, only 360-degree visualisations were produced to Deadline 4.</p> <p>1.2. In respect of 360-degree views produced at Deadline 4 involving the visual impact of the A303 on the WHS, it is only too obvious that the viewpoints chosen are those that would show minimal impact of the Scheme in operation. At the same time, since the viewpoints are largely distant from the current A303, they provide ample evidence that the present A303 has little impact in views from the wider WHS landscape, for example:</p> <p>REP4-012: view from N end of Winterbourne Stoke Barrow Group</p> <p>REP-013: view from pedestrian access gate to Winterbourne Stoke Barrow Group REP4-015: viewpoint located where the Avenue crosses King Barrow Ridge</p> <p>We note that no 360-degree visualisation has been produced of the view of the Scheme across the road cutting from the southern end of Winterbourne Stoke long barrow, to which public access is permitted. Nor, as we had requested, is there a dynamic view for a person walking along the planned A303 byway looking southward over the</p>	<p>For consistency, the location of the 360-degree views match those locations from the landscape and visual impact assessment [APP-045] from which a photomontage was produced. These photomontage locations were agreed with Wiltshire Council. The locations include views of the River Till viaduct, which is predicted to result in a significant adverse landscape effect to the local landscape character area, as well as localised views, and the Countess flyover, which is predicted to result in a significant adverse visual effect to Countess Farm. Therefore, the Applicant respectfully does not agree that the locations were chosen to show “minimal impact” of the Scheme, as suggested by the question; nor that the viewpoints are “largely distant”.</p> <p>The 360-degree views animate the proposed Scheme, and therefore the existing traffic on the existing A303 is not included in the visualisations referred to in the question. Please refer to the representative photographs [APP-092 to APP-127] for photographs of the existing A303 and its associated traffic.</p> <p>The Applicant is undertaking photomontages in respect of dynamic views and views from across Green Bridge No.4, looking across the western approach cutting and onto the A303 restricted byway, which are issued at deadline 7. The Applicant is not undertaking dynamic views accompanied by sound along the existing A303 as visualisations have already been submitted and an assessment of noise is within Chapter 9 of the Environmental Statement [APP-047].</p>

	cutting and western portal and, travelling the other way, towards the green bridge: such views ought to be possible, ideally accompanied by the simulated sound of traffic emerging from the portals and green bridge and passing through the cutting. Perhaps Highways England may be working on production of these visualisations.	
6.2.2	<p>Agenda Item 3: Methodology and Modelling</p> <p>Extent of Modelling</p> <p>1.1 Highways England incorrectly state that Stonehenge Alliance claim that congestion “is predicted on the M3 by 2020”. We do not have this information. Instead we referred to Road Investment Strategy 1, which contains diagrams showing “regular” congestion east of Basingstoke in 2010, rising to “severe” congestion by 20401.</p>	<p>Highways England thanks the Stonehenge Alliance for the clarification set out in paragraph 2.1. Highways England would observe that the figures referred to on pages 37 and 38 of the Road Investment Strategy illustrate a similar increase in the illustrated level of congestion on both the M4 between Reading and the M25 and M3 between Frimley and the M25 and would not, in itself, therefore indicate any reason to hypothesise any particular change in routeing between the two corridors.</p> <p>Future congestion on the M3 (and M4) to the east of the fully modelled area is represented in Highways England's assessment of the Scheme, as explained in paragraphs 16.3.36 – 16.4.41 of the Applicant's Comments on Written Representations [REP3-013].</p>
6.2.3	<p>1.2 Highways England quote current journey times on the M3 in support of their argument that congestion would not have a significant impact on route choice. However this is not necessarily the case if congestion levels rise as predicted in Road Investment Strategy 1. In particular, they focus on delays which currently occur at peak periods. With higher overall levels of congestion, one would expect delays to both become more severe at these times and to extend over a much longer period of the day. Although we consider that forecasts of traffic growth are much more uncertain than Highways England claim, these are an essential underpinning of their case for the scheme, so it is important that the wider implications are understood.</p>	<p>As noted in Section 3.1 of Highways England's written summary of the oral submissions put at ISH6 regarding Traffic and Transport [REP4-034], only around 20% of traffic using the A303 past Stonehenge would access the M3 from the north and east, with 12% routeing to the south-east of the M3. As concluded in Highways England's response, the uncertainty around the accuracy with which congestion is represented may affect around 2% of traffic using the A303 past Stonehenge, noting the periods of the day when congestion is observed. This is within the bounds of acceptable forecasting uncertainty and is unlikely to have any material impact upon the conclusions drawn from the modelling work undertaken.</p> <p>The Applicant's response to the Examining Authority's Written Questions Tr.2.1 [REP6-032], explains further that forecasts over different forecast years and from sensitivity testing including low and high growth scenarios (reported in section 5.7 of the Traffic Forecasting Report (Appendix C of the Combined Modelling and Appraisal Report (ComMA), [APP-301]) and in section 7 of the</p>

		<p>Economic Appraisal Package (Appendix D of ComMA, [APP-302]) show that the main traffic impacts are evident in all forecast years and scenarios.</p> <p>Stonehenge Alliance speculate that there may be a significant impact on route choice if M3 congestion increases. As noted above, the evidence cited by Stonehenge Alliance does not indicate differential delays on the M3 relative to the M4 nor is there any basis provided by Stonehenge Alliance to explain let alone sustain the conjecture that congestion would extend to a material extent over the course of the day. However, even if this were to be the case and the 2% of scheme-related traffic currently assessed to be affected by M3 congestion were to increase, as explained in Tr.2.1, the sensitivity analysis undertaken demonstrates that the traffic impacts arising from the scheme would not be materially affected.</p>
6.2.4	<p>a. 2.3 Highways England set out evidence on the proportions of traffic accessing the M3 from different directions. We do not have access to their traffic model so cannot comment on the accuracy of these data. It would be very helpful for the ExA and interested parties to have access to the model, so that all parties could understand traffic patterns better and the model's sensitivity to a range of assumptions. In any case, Highways England state that one third of traffic using the A303 between Amesbury and Berwick Down also travels on the M3 east of Farnborough. This directly contradicts Mr Hanson's contention at the Hearing, that traffic from outside the area modelled in detail is of minimum relevance. They state that 20% of traffic originates or destines to the north and east of the M3 and could potentially switch to the M4/M5.</p>	<p>Transport models are implemented using specialist software to which few stakeholders have access or expertise to use; accordingly, standard practice for all planning applications is to provide detailed documentation, the Combined Modelling and Appraisal [APP-298] and associated appendices that provides an explanation of the traffic modelling and forecasts.</p> <p>In evidence set out at Issues Specific Hearing 6, Mr. Hanson noted that the proportion of relevant traffic was negligible. This is affirmed in Section 3.1 of the written summary of the oral submissions put at ISH6 regarding Traffic and Transport [REP4-034], which notes that ten percent of traffic using the A303 near the scheme occurs at the relevant times of day where congestion is observed; thus 10% of the 20% of traffic using the M3 section in question could be affected by uncertainty in the representation of congestion on the M3. That is 2% of traffic using the A303 by Stonehenge in total, which is not of material relevance. This point is summarised in Highways England's responses to Written Question Tr.2.1 in REP6-032.</p>
6.2.5	<p>b. Highways England estimate that only 2% of current traffic might switch to the M4/M5 based on their assessment of current congestion on the M3. However a much higher percentage could switch if congestion continues to increase on the M3, as predicted in the Road Investment Strategy. In addition, some of the 12% of traffic from the south east of the M3 might switch to other roads, though not</p>	<p>As noted in Highways England's response to Written Question Tr.2.1 [REP6-032], the traffic forecasting has been sensitivity tested to a higher growth demand scenario than that of the 'Core' traffic forecasts, following guidance set out in the national methodology – DfT's WebTAG. The 'High' growth forecast (reported in section 5.7 of the Forecasting Report (Appendix C of the Combined Modelling and Appraisal Report (ComMA), [APP-301]) and in</p>

	necessarily the M4/M5 if the M3 becomes more congested, resulting in drivers not using the A303 near Stonehenge. As is well established, the relationship between traffic flow and delay is not linear so that even a relatively small reduction in traffic flow can lead to a significant reduction in delay, impacting on both the need for the project and its – already very weak – economic case.	section 7 of the Economic Appraisal Package (Appendix D of ComMA, [APP-302])) shows that the principal traffic impacts forecast are evident in all forecast scenarios and for all forecast years. The same is true of the ‘Low’ growth forecast. The evidence provided demonstrates that the scheme impacts assessed are not particularly sensitive to the level of traffic growth; the theoretical speculation by Stonehenge Alliance is not borne out by the evidence.
6.2.6	c. In summary, Stonehenge Alliance continues to consider that the extent of the modelled area is a matter of concern, which affects the reliability of the traffic forecasts.	<p>The Applicant has demonstrated the process used to determine the extent of the Area of Detailed Modelling (AoDM) where the effects of the scheme are expected to be significant in Appendix A of the Transport Model Package (Appendix B of the Combined Modelling and Appraisal (ComMA) report [APP-300]). The Traffic Forecasting Package (Appendix C of the ComMA [APP-301]) confirms the material impacts of the scheme are located within the AoDM, and those of weaker magnitude within the Fully Modelled Area (FMA).</p> <p>Following this evidence, and – with respect to Stonehenge Alliance’s concerns over the representation of the M3 in the modelled External Area, which have been considered and rebutted in evidence provided in both REP4-034, Highways England’s response to Written Question Tr.2.1 in REP6-032 and evidence provided above – the Applicant rejects that the extent of the modelled areas is a cause for concern and rejects that the modelled extents affect the reliability of the traffic forecasts.</p>
6.2.7	<p>Variable Demand Modelling</p> <p>d. Stonehenge Alliance has previously expressed concern that the coefficients in the Variable Demand Modelling element of the model have not been made available. Our initial concern was that model coefficients calibrated over the whole of the South West Regional Traffic Model area might not accurately represent the responses of users of the A303 at Stonehenge. From the evidence presented at the Hearing by Mr. Hanson, and the additional information provided by Highways England, we now understand that calibration was undertaken at a national level. This only increases our concerns about the relevance of the model coefficients for this project.</p>	<p>The summary of oral submissions put at ISH6 regarding Traffic and Transport, Section 3.1 [REP4-034] sets out how each of the Highways England Regional Traffic Models (RTMs) were calibrated and provides a summary of the application documents that demonstrate that the variable demand modelling is compliant with guidance as set out in WebTAG unit M2.</p> <p>Highways England note that Mr. Hanson’s oral submission at ISH6 stated that <i>the “Calibration of those [the RTMs] models did follow guidance, quite carefully” and that, as it transpires, “the work done for those [the RTMs] demonstrated that the central parameters defined in guidance were applicable as might be expected for a national suite of tools”</i>. As Mr. Hanson noted, this <i>“demonstrates the coherence and consistency of [the] guidance that they are built on”</i>. It should be noted that this is not the same as Stonehenge Alliance’s assertion that the calibration of the South West RTM</p>

		<p>was undertaken at a national level. Mr. Hanson also noted that the “<i>evidence of sensitivity that WebTAG relies on – in terms of demonstrating sensitivity [i.e. realism tests] – is based on national and not local sensitivity, and so it is appropriate to keep national relationships in-tact</i>”.</p> <p>The Examining Authority should therefore take comfort in noting that the model development has been undertaken in accordance with guidance and that the Variable Demand Model element of the model suite is appropriate.</p>
6.2.8	<p>Traffic Growth Forecasts</p> <p>2.7 In our Written Representations and at the Hearing, Stonehenge Alliance has set out strong arguments that the traffic growth forecasts used by Highways England are subject to much greater uncertainty than they accept, and may well be over-stated. Highways England’s approach is not consistent with the Department for Transport’s move to scenario-based forecasting, or with current Government policy to create a zero carbon economy by 2050. While their approach may have been in line with the letter of Guidance at the time their application was submitted, Stonehenge Alliance considers that the Examining Authority should challenge Highways England to demonstrate the robustness of their case in the light of these changes.</p>	<p>The Applicant's response to Written Question Tr.2.1(i) [REP6-032] explains that the application follows guidance in accordance with NPSNN paragraphs 4.6 and 4.7. The response explains that the DfT has not completed its research into whether or how guidance on forecasting uncertainty for the appraisal of schemes should be developed, nor does the DfT advise that there is an imminent change to the guidance. The analysis presented by DfT in their Road Traffic forecasts (RTF18) express a range of uncertainty, not of bias or over statement.</p> <p>As further explained in response to Tr.2.1 (ii), the material impacts of the scheme are comparable in the different forecast years and for the low and high growth sensitivity analysis undertaken. The nature of the traffic impacts of this scheme are not particularly sensitive to the forecasting assumptions.</p>
6.2.9	<p>Frequency of Busy Days</p> <p>2.8 We are pleased that Mr Hanson agrees with us that the Trafficmaster data used to assess the level of delay on different days of the year “uses observations of journey times related to free-flow conditions and follow the pattern of delay as traffic increases”. However we remain concerned that this does not provide a reasonable basis on which to base an assessment of the number of days on which significant problems occur. As stated previously, it is unrealistic to expect any road that carries significant volumes of traffic to experience free flow conditions throughout the year. The absence of free flow conditions is not, in itself, sufficient to demonstrate the need for intervention. In order to provide greater clarity on this issue, it would be helpful if Highways England could set</p>	<p>The response to Written Question Tr.2.2 [REP6-032] explains that the information provided in response to Tr.1.11 [REP2-036] was provided to illustrate that delays occur throughout the year. It is important to note that the traffic modelling and subsequent economic appraisal do not rely on a comparison to the ‘fastest day’ or ‘free-flow conditions’.</p> <p>As further set out in the response to Tr.2.2, the ComMA documentation [APP-298] explains how the transport models appropriately represent the distribution of delay for the appraisal of the Scheme. Chapter 6 of the Transport Data Package (Appendix A to the ComMA) [APP-299] provides an overview of the Trafficmaster dataset used to validate the ‘A303 Stonehenge SWRTM (DCO)’ traffic model, noting an entire year’s worth of data from July 2016 to June 2017 were analysed. Section 4.5 of the Transport Model Package (Appendix B to the ComMA) [APP-300] explains how the data</p>

	<p>out its assessment of the average journey time for each day of the year. This would promote an informed debate about the definition of severe congestion and how often it is experienced.</p>	<p>analysis informed the definition of modelled periods and paragraphs 5.5.6 through 5.5.9 highlight how the average median travel times by model time period have been extracted from the Trafficmaster data; these average times used to validate the traffic model are given in Table 5-6 by route, with route 11-1 highlighting material difference in the median travel time in the Summer compared with the neutral time periods. Tables 11-11 to 11-14 demonstrate that the model suitably represents the average median travel times from the Trafficmaster dataset, within the criteria specified in WebTAG unit M3-1. Further to this, paragraph 5.3.36 and Figure 5-2 of the Economic Appraisal Package (Appendix D to the ComMA) [APP-302] verify that the annualised average delay as calculated from the model correctly represents the average delay observed in the Trafficmaster data.</p> <p>Thus, the Applicant's previous responses to Tr.2.2 and evidence set out in the ComMA documentation both demonstrate how the distribution of travel times was reflected in defining the modelled periods and that the model appropriately reflects travel conditions.</p>
6.2.10	<p>Agenda Item 7: Assessment of Other Suggested Routes</p> <p>Route F010</p> <p>3.1 Paragraph 4.27 of the National Policy Statement for National Networks² does state, as Mr Taylor asserted, that the Examining Authority does not need to re-open the option assessment process. However it should be satisfied that this has been carried out in an objective and proportional way. It should also be satisfied that adequate public consultation has been undertaken, in line with Guidance. As stated in our Written Representations, Stonehenge Alliance has a number of serious concerns about the option identification and assessment process undertaken by Highways England.</p>	<p>As explained in the Applicant's response to Written Question AL.1.11 [REP2-024], the Consultation Report [APP-026] sets out the approach to stakeholder engagement and public consultation and explains how Highways England has complied with the pre-application consultation requirements set out in the Planning Act (2008), the Infrastructure Planning (Application: Prescribed Forms and Procedure) Regulations 2009 (APFP Regulations) and the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (EIA Regulations).</p>
6.2.11	<p>3.2 In relation to options for a dual carriageway "Expressway", Highways England's own assessment identified three options - D061, D062 and F010 – which were considered worthy of a full WebTAG appraisal³. However Option F010 was not taken forward to public consultation despite a similar economic performance in the</p>	<p>The TAR [REP1-031] sets out the comprehensive staged assessment appraisal of options undertaken by the Applicant. A proportionate and appropriate assessment, compliant with WebTAG, was undertaken at each stage.</p>

	<p>evaluation to the other options, lower costs and the absence of any “show stoppers” that would prevent its implementation. In the Stonehenge Alliance’s view, the reasons for not taking F010 forward are questionable and unconvincing.</p>	<p>The Applicant’s response to written question AL.1.11 [REP2-024] summarises the evidence why F010 would have greater impacts than the D061 and D062 options and the response to Written Question AL.1.12 details the process that led to the rejection of option F010 being taken forward as a preferred route for consultation. The response to AL.1.13 explains that while acknowledging the benefits to the WHS of option F010, the TAR concluded [REP1-31 para 22.1.5] that, on balance, Route Options D061 and D062 would deliver a better fit against the relevant local and national planning, transport and economic policy objectives, than Route Option F010, and thus they would achieve the Scheme objectives more effectively.</p>
6.2.12	<p>3.3 Specifically in relation to the traffic assessment, Highways England state “the modelling also indicated that the longer F010 route option would lead to more long-distance traffic using the local road network (rat running), more than doubling the volume of traffic currently diverting through the villages of Durrington, Larkhill and Shrewton. This would lead to increased noise, worsened air quality and a greater likelihood of accidents along the unsuitable local roads and through the local communities.” (Scheme Appraisal Report, para. 4.5.7). This then feeds through to the social impact, distributional and safety assessments. In fact, Highways England’s own modelling shows the forecast levels of traffic on the local road network are not very high and that they would reduce with Option F010 (Technical Appraisal Report, Figures 10.2 to 10.5). The quotation above is, at best, highly misleading.</p>	<p>The Applicant has commented (at deadline 5 [Paragraph 11.2.47 of REP5-003]) on Stonehenge Alliance’s response. The response to Written Question AL.1.11 [REP2-024] explains that “The longer distance and alignment of F010 make this option less attractive for local movements than D061 / D062 and it is more likely that trips making local movements, including HGVs, will use the local roads north of the A303.</p>
6.2.13	<p>3.4 Rat running is not defined by Highways England. In principle this could cover two impacts:</p> <ul style="list-style-type: none"> • drivers regularly selecting an alternative route to avoid predictable congestion, and • spontaneous re-routing to avoid unexpected delay due to incidents or day to day variation in traffic volumes. <p>The first impact should be included in the modelling, which shows that Option F010 would reduce flows. Highways England claim that improved journey time reliability is a key benefit of the project,</p>	<p>Please see Highways England’s comment expressed in response to items 6.1.12 and 6.1.13 above.</p>

	thereby reducing any incentive to rat running due to unexpected delay. In any case, Option F010 takes the A303 further away from communities such as Larkhill and Shrewton, making it less likely that the route through them would be used for rat running. We have made this point previously and not received any response. Accordingly we do not agree with the above quotation.	
6.2.14	<p>Agenda Item 8: Economic and Benefit Cost Ratio Assessment</p> <p>a. We note that Highways England did not seek to defend the methodology used for the Contingent Valuation Study verbally at the Hearing. This contrasts with the traffic modelling, where Mr. Hanson gave verbal evidence. Stonehenge Alliance finds this surprising given that the results of the Contingent Valuation Study account for the great majority of the claimed monetary benefits of the project.</p>	<p>Highways England have defended the methodology of the Contingent Valuation Study in its response to written representations submitted by the SHA and the CBA throughout the Examination - see REP3-013 section 13, in response to Jon Morris; see REP5-003 section 3, in response to Jon Morris; REP5-003 section 11, in response to the SHA; and REP6-032, in response to SWQ Tr.2.3. These submissions deal with the points that were made by the SHA in its oral submissions at the hearing.</p> <p>Its methodology, what it says about the economic benefits of the Scheme, and its role in decision making are fully discussed in those submissions.</p>
6.2.15	We also note that Highways England have not sought to defend the overall economic case.	The overall economic case for this scheme is well set out in the Application documents. The approach used robust analytical methods and demonstrates the benefits outweigh the costs.
6.2.16	<p>4.3 We are puzzled by Mr. Taylor's statement that "the contingent valuation study does not seek to say that its results are the economic benefits deriving from the Scheme, but instead seeks to quantify the heritage benefits for valuation purposes". We are not clear what the difference between "economic</p> <p>benefits" and quantified "heritage benefits" is in this context. In any case, the results of the Contingent Valuation Study are used as the main contributor to the economic benefits of the project in the cost benefit appraisal.</p>	<p>Mr Taylor's statement is intended to distinguish between the impacts of the scheme and the way they have been translated into a monetary unit of account.</p> <p>Impacts on the economy differ from impacts on cultural heritage. Methods of economic analysis, and in this case the contingent valuation study, can help to express impacts on cultural heritage as a money value. It is important to be clear that the economic assessment of the value of changes in cultural heritage is not equivalent to the impacts on the economy of changes in cultural heritage.</p>
6.2.17	4.4 Stonehenge Alliance strongly disagrees with Mr. Taylor's assertion that the monetary evaluation of the costs and benefits of the project is not relevant to consideration of whether the adverse impacts of the project would outweigh its benefits. Economic appraisal is a technique for assessing the benefits and costs of a	Highways England has already responded to Stonehenge Alliance on this point at deadline 5 – please see REP5-003 section 11.1.12, fourth paragraph.

	project in monetary terms and is therefore highly relevant to considering whether the negative impacts outweigh the benefits, independently of any decision on funding.	
6.2.18	4.5 As we argue elsewhere, the inputs to the monetary appraisal are subject to considerable uncertainty and the benefits may be overstated. This is supported in the recent National Audit Office report on the project ⁴ . This highlighted both that “the economic case relies on heritage benefits that are uncertain” (page 6) and “the current range of capital costs of the project including VAT, is £1.5 billion to £2.4 billion (2016 prices)” (page 8). These issues should be included in the Examining Authority’s overall assessment.	The Applicant acknowledges the findings of the NAO report. However, it considers that based on the agreed methodology, the results are acceptable and robust. Econometric and statistical validity methods allowed 95% confidence intervals to be established around the overall NPV that show the aggregate net WTP is between £1.2bn and £1.5bn.
6.2.19	4.6 Furthermore, this project has major negative impacts, for example on archaeology, which cannot be expressed in monetary terms. Accordingly, the monetary evaluation cannot be simply taken in isolation as measuring whether the negative impacts outweigh the benefits, but it is an important element of the overall assessment of whether the project complies with Section 104 of the Planning Act.	<p>Please see Highways England’s response to item 11.1.12 in the Comments on any further information requested by the ExA and received at deadline 4 [REP5-003] in relation to the relevance of the monetary evaluation to the planning decision to be made on the Scheme.</p> <p>The Applicant disagrees with the Stonehenge Alliance comment that ‘this project has major negative impacts, for example on archaeology’. The impacts on archaeological remains are as assessed in the ES [APP-044]. The ES also reports a large number of significant benefits to heritage assets across the WHS following the construction of the Scheme.</p>
6.2.20	<p>Issue Specific Hearing 7: Biodiversity and Ecology</p> <p>2.1.2. Stonehenge Alliance comments</p> <p>The decision-maker will need to have certainty that there will be no adverse effects on the Stone Curlew population “beyond reasonable scientific doubt”. It is therefore not satisfactory to leave important decisions concerning the well-being and safety of the birds during construction to the contractors: these matters should be fully detailed within the DCO so that the decision-maker may have the required certainty in accordance with the demands of the Habitats Regulations. We trust that the finalised OEMP will contain all the measures necessary for the required level of certainty.</p>	As stated in PW-BIO5 of the OEMP [REP6-011], the contractor/ contractor’s appointed ecologist will be responsible for producing the working method statements with regards to stone curlew. Items PW-BIO5 and MW-BIO8 of the OEMP contain deterrence and anti-disturbance measures in respect of stone curlew, the precise nature of which will need to be determined on a case by case basis in consultation with relevant stakeholders. Monitoring and reporting arrangements will be developed by the Ecological Clerk of Works in consultation with Natural England and RSPB and ultimately approved by Highways England (as the Authority). In addition, an appropriate specialist shall undertake monitoring of stone curlews under the above OEMP items. Compliance with the provisions of the OEMP is secured by Requirement 4 of the DCO [REP6-005]. Taken together, these measures are considered to

		provide sufficient certainty that disturbance impacts on nesting stone curlew will be avoided during the construction phase.
6.2.21	<p>3.1.2. Stonehenge Alliance comments</p> <p>Measures to protect Stone Curlew and Great Bustard may need to differ in view of what was said about the habits of these birds at the ISH. The proposed bunds would be unlikely to deter birds in flight.</p>	<p>The aim of bunds within the DCO limits during construction is not to deter birds of either species in flight. However, for birds nesting on the ground, bunds can provide screening of activity within construction compounds which could disturb nesting stone curlew / great bustard within sight of it. Hence bunds contribute to avoiding disturbance impacts on stone curlew and great bustard, together with other potential measures.</p> <p>Please see response to Highways England's response to Written Question Ec.2.4 [REP6-024] which describes these measures with respect to great bustard.</p> <p>Deterrent and anti-disturbance (including screening) measures will be incorporated into the Scheme on a site by site basis, which may include exclusion zones (where appropriate), following consultation with the RSPB, Natural England, and the Great Bustard Group as applicable, as stated within PW-BIO5 and MW-BIO8 of the OEMP [REP6-011]. It should be noted that once the Scheme is under construction, the deterrence measures employed would mean it is likely that birds would be deterred from nesting within the active working areas or within line of sight of them.</p>
6.2.22	<p>4.1.2. Stonehenge Alliance comments</p> <p>We suggest that measures for protection of the Great Bustard in the OEMP would need to provide certainty for the decision-maker of no adverse effects.</p>	<p>Please see response to Highways England's response to Written Question Ec.2.4 [REP6-024] which details potential anti-disturbance measures with respect to great bustard that could be implemented under item MW-BIO8 of the OEMP. The measures stated within the OEMP [REP6-011] are considered suitable to avoid impacts on nesting great bustards within the area.</p>
6.2.23	<p>5.1.2. Stonehenge Alliance comments</p> <p>We note there is no certainty that dewatering would not be required. Furthermore, no mention is made by Highways England of the potential for bentonite grouting (used in conjunction with tunnel boring) to cause contamination of the groundwater and subsequently the SAC. It is our view that certainty on these matters is not</p>	<p>Please see response to item 21.1.16 in the Comments on any Further Information at deadline 4 [REP5-003] which explains that the Applicant's current proposal assumes the use of a closed-face TBM for the main tunnel construction (secured through item D-CH32 of the OEMP) as this is the best option for tunnelling under these conditions as it provides greater control on settlement and removes the need for dewatering. However, if groundwater</p>

	<p>something to be left until after any DCO might be granted, since it is the decision-maker who is responsible for ensuring that there will be no adverse effects on the SAC arising from the Scheme.</p>	<p>control is required, the extent and duration of groundwater control would be minimised, and any mitigation measures will be achieved through the Outline Environmental Management Plan (OEMP) [REP6-011] (see e.g. MW-WAT8 and the need for a Groundwater Management Plan).</p> <p>The Applicant's response to item 11.1.4 in the Comments on any Further Information at deadline 4 [REP5-003] describes the characteristics of bentonite grouting and explains that it will be controlled through approval by the EA (as required by OEMP item MW-WAT9). Any proposal from the works contractor to dewater will require formal Environment Agency approval and licences.</p>
6.2.24	<p>Agenda item 8. ANY OTHER MATTERS</p> <p>6.1. We note that the issue of increased recreational activity close to Normanton Down reserve has not yet been resolved. There was no mention, in relation to matters raised about increased recreation in the southern part of the WHS, of the in-combination effects of increased recreational use of Salisbury Plain owing to new Army housing for which there is at present no convincing evidence to indicate that there will be no adverse effects on the SPA. The decision-maker will need assurance that the in-combination effects of these recreational activities will give rise to no adverse effects on the Stone Curlew population associated with the SPA: we hope that the Statement to inform the Appropriate Assessment will be amended accordingly, once measures to ensure no adverse effect have been decided upon.</p>	<p>Please refer to Highways England's response to Written Question Ec.2.3 [REP6-024] and the accompanying HRSA Clarification Note, [REP6-039] which outlines Highways England's commitment to provide nesting opportunities for the stone curlew population in the vicinity of the Scheme.</p>
6.3	Comments on Revision 1 of the Draft Detailed Archaeological Mitigation Strategy [REP4-025]	
	Matter Raised	Highways England's Response
6.3.1	<p>1. DDAMS Section 2. Principles for archaeological mitigation</p> <p>1.1. DDAMS Section 2.2. General Principles</p>	<p>Ploughzone artefact scatters of Neolithic or Early Bronze Age date have been identified in a number of locations within and adjacent to the WHS. These scatters add to the contextual background and understanding of the WHS and how it was used. Their significance is assessed in relation to their</p>

	<p>1.1.1. Para. 2.2.2 of the dDAMS provides a set of principles “to guide actions to ensure the conservation of heritage assets throughout the WHS and within the Scheme.”</p> <p>1.1.2. In para.2.2.3 of the document, Highways England recognizes (last bullet point) that</p> <p>ploughzone scatters of artefacts “may” contribute to OUV. However, it is now clear from analysis of material from evaluation that such scatters can in some instances be all that is left of settlement remains, i.e., ‘associated sites’ and that they must therefore be counted as attributes of OUV and heritage assets in their own right. No account appears has been taken of this crucial evidence in Highways England’s overall assessment of the impact of the scheme on the WHS.</p> <p>Should that assessment be revised?</p>	<p>research potential in line with, for example, the Research Framework for the Stonehenge, Avebury and Associated Sites WHS (Leivers and Powell 2016) and is presented in the HIA [APP-195]; see also the Applicant’s response to agenda items 11.2.37, 34.1.2 and 34.1.7 in the Comments on any Further Information at deadline 4 [REP5-003]. The remains concerned comprise predominantly the waste products of flint preparation, and a small component identifiable to type that provides a chronological framework for their deposition. This material spans two millennia or more, is wholly incorporated into the ploughsoil and is unstratified. As stated in our submission [REP3-024], some of this material may potentially be related to occupation. However, whilst these artefact scatters contribute to the body of evidence for activity in the WHS and may contribute to the understanding of associated sites in the context of OUV, they do not themselves convey OUV due to the limited value of their remains. The OUV of the WHS would not be lost by the removal of these remains.</p> <p>Highways England has assessed this material in the HIA [APP-195; Section 6.10, paragraphs 6.10.33, 6.10.34, 9.3.5 and 9.3.6] and it is incorrect to say that ‘No account... has been taken of this crucial evidence’; we also assess a Slight Adverse effect on Attribute 2 of the OUV of the WHS due to their presence along with other isolated and discrete archaeological features (such as pits) within the road alignment. There is therefore no need to revise the HIA which remains valid as these artefacts have been taken into account.</p>
6.3.2	<p>1.2. DDAMS Section 2.3. Detailed Principles</p> <p>In para. 2.3.1 of the dDAMS we note the bullet point principle which reads “Do not harm the integrity or authenticity of the WHS or the assets that contribute to the OUV of the WHS”. This important principle has not so far been adopted, nor would it be employed if the Scheme were to be implemented.</p>	<p>The Applicant has updated the principles in the draft DAMS submitted at deadline 6 [REP6-013] following consultation with HMAG, which now states: “Avoid and minimise harm to the integrity or authenticity of the WHS or the assets that contribute to the OUV of the WHS.” The Applicant disagrees that this principle has not been adopted so far in the design of the Scheme and that this principle would not carry on being applied during the preliminary works and main works phases.</p> <p>The Applicant considers that the HIA has been carried out accurately in compliance with the Guidance on Heritage Impact Assessments for Cultural World Heritage Properties adopted by the International Council on Monuments and Sites (ICOMOS 2011) and with a full appreciation and understanding of the importance of the WHS and its OUV including the</p>

		<p>Integrity, Authenticity and the Attributes that convey OUV. The Scheme avoids known funerary and ceremonial monuments and has been designed to minimise landtake and the loss of archaeological remains within the WHS. The loss of archaeological remains has been taken into account in arriving at the assessment of harm to the attributes of OUV.</p> <p>With regard to integrity, “Integrity is a measure of the completeness or intactness of the attributes that convey Outstanding Universal Value’ (UNESCO, ICCROM, ICOMOS and IUCN 2011 Preparing World Heritage Nominations. World Heritage Resource Manual. 2nd ed., 65-67 https://whc.unesco.org/document/116069). The Statement of OUV notes in respect of integrity that, ‘The boundaries of the property capture the Attributes that together convey Outstanding Universal Value at Stonehenge and Avebury. They contain the major Neolithic and Bronze Age monuments that exemplify the creative genius and technological skills for which the property is inscribed. The Avebury and Stonehenge landscapes are extensive, both being around 25 square kilometres, and capture the relationship between the monuments as well as their landscape setting. [...] The survival of the Neolithic and Bronze Age monuments at both Stonehenge and Avebury is exceptional and remarkable given their age – they were built and used between around 3700 and 1600 BC. Stone and earth monuments retain their original design and materials. The timber structures have disappeared but postholes indicate their location. Monuments have been regularly maintained and repaired as necessary. The presence of busy main roads going through the World Heritage property impacts adversely on its integrity.”</p> <p>It is plain that the test of integrity in relation to the WHS relates to the completeness of the attributes that convey OUV, in terms of the adequacy of the boundary of the WHS, and to the intactness of the attributes. In respect of intactness as an aspect of integrity, the remains that will be removed by the construction of the Scheme do not ‘make a significant contribution to the OUV of the WHS’ such that the integrity of the WHS would be diminished by the removal of these remains. The HIA [APP-195] sets out the impacts and effects of the Scheme on the Integrity of the WHS [paragraphs 9.4.41-9.4.45 and 11.2.9-11.2.10], noting that there are a mixture of positive and negative changes as a result of the Scheme, including the embedded Scheme design which assists in minimising impacts on integrity, but concluding overall that ‘it</p>
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		<p>is anticipated that the Scheme would have a Negligible Positive impact on the Integrity of the WHS, resulting in a Slight Beneficial effect.'</p> <p>The Applicant does not accept that the Scheme assessment has failed to consider any element of the effects of the Scheme on the Authenticity of the WHS [APP-195; paragraphs 9.4.46 – 9.4.50 and 11.2.11 – 11.2.12]. The Scheme would have a mixture of positive and negative impacts on the Authenticity of the WHS, including the removal of 3.3km of the existing surface road into a tunnel. The surface road has an existing adverse impact on the setting of the property. Both its visual and aural impacts disrupt the spirit and feeling of the property. "Overall, it is anticipated that the Scheme would have a Negligible Positive impact on the Authenticity of the WHS, resulting in a Slight Beneficial effect".</p>
6.3.3	<p>2. DDAMS Section 3. Archaeological research strategy</p> <p>2.1. The dDAMS, at para.3.3.4, says "The Scheme has been designed to avoid impacts upon known elements of the archaeological resource. Nonetheless, both inside and beyond the WHS, new evidence has been produced." Paras. 3.3.17ff. of the dDAMS list significant finds: i.e., attributes of OUV or sites/features/artefacts related and complementary to the attributes of OUV of the WHS.</p> <p>2.2. The updated dDAMS provides compelling evidence that substantially more is now known about previously unknown sites/features on the trace of the Scheme with the potential for the existence of further sites, features, burials (i.e., attributes of OUV) in the areas of the cuttings, tunnel portals and the proposed new Longbarrow junction. The evaluation work has produced evidence of earlier and later periods which is also of crucial importance to the development of the WHS over time. The scheme would no longer be seen to "avoid impacts upon known elements of the archaeological resource".</p> <p>2.3. In view of the major potential for careful (and time-consuming) research in these areas and in light of the principles mentioned above in dDAMS Sections 2.2 and 2.3, should the</p>	<p>2.1 The Applicant disagrees that new evidence has been produced regarding the archaeological resource both inside and outside the WHS. The material cited was known about and included and assessed within the HIA [APP-195; paragraph 6.8.15 and 6.10.34, section on Longbarrow junction north and south]. To avoid confusion in terms of the wording of paragraph 4.4.4 of the DAMS, the Applicant has deleted this paragraph in the next iteration of the document. As stated above, the remains that will be removed by the construction of the Scheme do not 'make a significant contribution to the OUV of the WHS' such that the integrity of the WHS would be diminished by the removal of these remains.</p> <p>2.2 See response to 2.1 above. The Scheme has been the subject of an unprecedented level of detail of investigation of the area of the WHS covered by the Scheme in accordance with an archaeological evaluation strategy developed in consultation with HMAG and with input from the Scientific Committee. This has comprised up-to-date geophysical survey of the full red line boundary, ploughzone artefact sampling across all areas evaluated, and trial trenching, building on and augmenting the results of more than 25 years of previous investigations in connection with the A303, and taking into account the emerging results of academic research programmes undertaken over the last decade. This provides us with a robust baseline to assess the Scheme impacts and assess Scheme risks. The Scheme has been designed</p>

	<p>scheme now be reconsidered before more of the resource is lost, most notably that which relates to the OUV of the WHS?</p>	<p>to avoid known archaeological assets wherever possible and minimise landtake within the WHS.</p> <p>2.3. The Applicant does not agree that the Scheme should be reconsidered on the basis of this evidence. As noted in response to paragraph 2.1 above, the evidence informed the assessment that has been undertaken in the HIA. The remains that will be removed by the construction of the Scheme do not 'make a significant contribution to the OUV of the WHS' such that the integrity of the WHS would be diminished by the removal of these remains. The draft DAMS [REP6-013] has been developed in consultation with HMAG and with inputs from the Scientific Committee and includes an Archaeological Research Agenda at Section 4 to direct the best possible outcomes with regards to the required archaeological mitigation works.</p>
6.3.4	<p>2.4. It is evident that the "Research Questions" following sections detailing archaeology and new finds would fail to be adequately answered in the context of the large-scale destruction and small-scale sampling proposed.</p>	<p>The Applicant restates that the design has been specifically chosen to limit the landtake for the construction of the Scheme both within the WHS and outside of it in order to minimise the loss of archaeological remains. The Applicant does not accept that there will be 'large-scale destruction' of archaeological remains.</p> <p>The archaeological remains will be carefully excavated and recorded to high standards in advance of construction. That material, once published, is then available for reanalysis, re-interrogation and re-interpretation once the archive has been assembled and deposited with a Museum. The Archaeological Research Agenda, in Section 4 of the draft DAMS [REP6-013] has been specifically selected in relation to the archaeological remains that have been uncovered during the archaeological evaluations. The sampling is not 'small-scale' and the intelligent, reflexive mitigation strategy (including the sampling) is designed to respond to the significance of the archaeology in an iterative manner. This strategy has been developed in consultation with HMAG and with inputs from the Scientific Committee.</p>
6.3.5	<p>3. DDAMS Appendix E. Public Archaeology and Community Engagement Strategy</p> <p>3.1. E.14.1. Summary</p>	<p>The Applicant restates that the design has been specifically chosen to limit the landtake for the construction of the Scheme both within and without the WHS in order to minimise the loss of archaeological remains. In terms of landscape, the Scheme has been sensitively designed in order to integrate the Scheme into the existing landform and to remove the sight and sound of</p>

Despite the laudable aims of the PACE strategy as set out in dDAMS paras E.14.1.1–2, it cannot be denied that the Scheme would cause major damage to the WHS landscape and its setting, and considerable loss of crucial archaeological evidence. These concerns are already apparent in widespread public condemnation of the Scheme and are reflected in the 2019 Decision on Stonehenge by UNESCO's World Heritage Committee.

traffic from much of the WHS landscape, a key aspiration of the 2015 WHS Management Plan. Regarding Attribute 6 of the OUV of the WHS, 'The disposition, physical remains and settings of the key Neolithic and Bronze Age funerary, ceremonial and other monuments and sites of the period, which together form a landscape without parallel', the HIA [APP-195] assesses a Slight Beneficial effect. The Applicant does not accept that there will be 'considerable loss of crucial archaeological evidence' or 'large-scale destruction' of archaeological remains. The archaeological remains will be carefully excavated and recorded to high standards in advance of construction. That material, once published, is then available for re-analysis, re-interrogation and re-interpretation once the archive has been assembled and deposited with a Museum. The draft DAMS [REP6-013] has been developed in consultation with HMAG and with inputs from the Scientific Committee and includes an Archaeological Research Agenda at Section 4 to direct the best possible outcomes with regards to the required archaeological mitigation works.

Whilst the Scheme enjoys strong support from key heritage bodies and Wiltshire Council, along with other local authorities and the local enterprise partnerships in the South West, there are a range of views regarding the benefits offered by the Scheme and of course the Applicant recognises that some members of the public oppose the Scheme, whose views are heard as part of the examination.

Highways England (and DCMS in its State of Conservation Report submitted to the World Heritage Centre in February 2019) has explained why the proposed Scheme offers an optimal solution both to the transport problems on the A303 and to delivering benefits for the World Heritage Site and has set out why a longer tunnel is not a feasible alternative and cannot therefore be justified [see REP1-015]. Highways England continues to work closely with heritage stakeholders and will continue to report to and engage with UNESCO, ICOMOS and the World Heritage Committee through DCMS.

With respect to the decision formally adopted by the World Heritage Committee in July 2019, as recorded with respect to Agenda Item 3(v) in the Written Summary of oral submissions from the hearing [REP4-030], Mr Nichol of DCMS reported at the hearing that the view of DCMS was that the then draft decision amplifies the perceived negative impacts of the Scheme and

does not adequately reflect the extent to which the World Heritage Committee's 2018 decision has been taken into account by DCMS as the State Party and Highways England.

6.4 Responses to the Examining Authority's Second Round of Written Questions

	Matter Raised	Highways England's Response
6.4.1	<p>[In response to CH.2.6]</p> <p>Notwithstanding this question having been directed primarily towards the identification of archaeological remains, as detailed in previous submissions and evidence submitted by the Stonehenge Alliance, a thorough engineering geophysical assessment of the whole proposed A303 road and tunnel route would better inform the design, planning and understanding, in 3 dimensions, and to the critical depths of up to 100 metres for the proposed development.</p> <p>In this writer's specific experience and professional opinion, this is an essential step prior to any granting of any DCO.</p> <p>This would involve, inter alia, digitally based and recorded, engineering seismic surveying, deep ground probing radar, micro-magnetics, high resolution resistivity, electro-magnetics and gravity surveys.</p> <p>Existing previously obtained, shallow, localised archaeological oriented geophysical survey data should be integrated and refined by this deeper, more engineering-directed survey work.</p> <p>Integrated 3-D data analysis and presentation should be part of a comprehensive geological, geotechnical (rock property and structural), hydrogeological (on a chainage-scale basis, especially for the tunnel profile) and geophysical, detailed ground model of the proposed route and adjacent affected areas.</p>	<p>Please see response to Written Question Fg.2.51 [REP6-028] and agenda item 5.1 in the Written Summaries of Oral Submissions put at ISH4 regarding flood risk, groundwater, geology and waste [REP4-032] in relation to the need for a 3D model. The response explains that the Applicant is of the view that the information presented in the ES is more than adequate at this stage of the process to identify and assess impacts.</p>

	<p>This integrated Ground Model would be over 5 kilometres in length (at least from West Amesbury to Longbarrow Roundabout), over 100 metres in depth, and cover at least the areas up to 1 kilometre north and south of the proposed route, i.e. 2 kilometres in N-S plan.</p>	
6.4.2	<p>[In response to DCO.2.15, Fg.2.23, Fg.2.26, Fg.2.32 and Fg.2.33]</p> <p>Commentary and Combined Responses to all the above issues</p> <p>An adequate understanding of present groundwater conditions is significantly and fundamentally incomplete, in and around the route of the proposed A303 Stonehenge tunnel and associated highway works.</p> <p>As a major example of this point, the Whitway Rock (known to the east of the Salisbury area and in the SW of the Devizes BGS 1:50,000 geological map as the Stockbridge Rock) has not been identified in either phase of the site investigation work for the proposed Highways England A303 road and tunnel scheme.</p> <p>The Stockbridge Rock is referred to by Mortimore et al. (2017, page 8):</p> <p>“It is also possible that the hardground equates with the British Geological Survey Stockbridge Rock Member mapped on the Salisbury Sheet (Hopson, 2005). The Stockbridge Rock Member is a hard bed several metres below Barrois’ sponge bed. It is localised within a part of the</p> <p>Wessex basin controlled by syn-sedimentary faulting/folding along the line the Winchester- Dean Hill anticline (Fig. 2).”</p> <p>It is highly likely that the Blick Mead and nearby Amesbury Abbey spring system occurs on a sub-crop of the Whitway/Stockbridge Rock to the west of Countess Roundabout. The Blick Mead/Amesbury Abbey major spring system arises at the stratigraphic level of the Whitway Rock in the Seaford Chalk</p> <p>i.e. at approximately 5 metres below the base of the Newhaven Chalk. It is described (Soley et al., 2012) as</p>	<p>Please see response to item 11.1.3 in the Comments on any Further Information at deadline 4 [REP5-003] which explains that a conservative approach to modelling has been undertaken to simulate the effects of the Scheme on regional groundwater flow and sensitive receptors.</p> <p>The model has been refined in the area of the tunnel with data from pumping tests and preferential flow horizons have been considered using geological, geotechnical and geophysical data. It is therefore considered that the approach to modelling is robust and sound.</p> <p>Furthermore, REP3-018 Figure 2 shows the stratigraphic position of the Whitway Rock if it were present in the area. It would be situated largely above the tunnel profile. REP3-018 also describes that adjacent catchment studies by the British Geological Survey indicate the unit may not be present in the area.</p> <p>See Environment Agency response to the potential presence and location of the Whitway Rock in REP4-049 paragraph 1.2.3, which recognises that this unit has not been mapped in the area and if present is expected to be above the tunnel elevation.</p> <p>Additional boreholes are not considered necessary to support the ES and determination of the application because the conceptual model is robust, verified by monitoring [REP3-020], and the environmental assessment approach has been reviewed and considered appropriate by the Environment Agency and Wiltshire Council’s peer reviewers. This includes the interpretation of the significance of geological horizons for groundwater flow.</p>

	<p>“....an up to 5 metres thick hard porcellenous chalk layer near the boundary of the Seaford and Newhaven Chalk formations (the Stockbridge Rock/Whitway Rock Member, BGS Winchester Sheet, Booth 2002; Newbury Sheet 267, 2006). This latter hard layer is probably the lateral equivalent of Barrois’ SpongeBed, a regionally important marker bed.”</p> <p>There is therefore grave concern about long term effects due to potential changes in horizontal and vertical permeabilities of such zones as the Whitway Rock, the overlying Upper Seaford Chalk/Newhaven Beds, and fracture systems which control groundwater flow southwards below Stonehenge Bottom, respectively.</p> <p>It is therefore essential that additional, deeper, targetted (and carefully cored) borehole drilling is carried out, especially to the east of Stonehenge Bottom, as far as Countess Roundabout. This would enable proper investigation of geological and hydrogeological conditions at depth, below the proposed tunnel soffit level.</p> <p>Such boreholes would assess the presence or absence of the Whitway Rock in the area of the Scheme and if present, its hydrogeological significance, especially in the eastern section of the Chalk that is likely to be affected by tunnel construction and operations.</p>	
6.4.3	<p>The background to the adopted Wessex Basin Groundwater Model, and associated work, is detailed by Soley et al. (2012). This paper extensively discusses the Chalk aquifer properties across the South of England, confirms the 250m spacing of nodes for all the models, including the Wessex Basin model, as adopted virtually without any refinements (and at a wholly inappropriate coarse scale by Highways England, with the approval of the EA and Wiltshire Council).</p> <p>In this paper it is stated that the initial work carried out in advance of the Wessex Basin and associated groundwater modelling activities prior to 2012 was informed by a comprehensive 3-D ground model of all these areas, carried out by the British Geological Survey (BGS).</p>	<p>Please see response to item 11.1.3 in the Comments on any Further Information at deadline 4 [REP5-003].</p> <p>Modelling has been carried out at an appropriate scale to simulate the effects of the Scheme on regional groundwater flow and sensitive receptors. The modelling has been reviewed and considered appropriate by the Environment Agency and Wiltshire Council’s peer reviewers.</p> <p>This model has been refined in the area of the tunnel with aquifer property data from pumping tests and preferential flow horizons have been considered using geological, geotechnical and geophysical data.</p>

	The Stonehenge Alliance continues to refute that Highways England groundwater modelling is “fit for purpose” for accurately modelling groundwater effects relevant to the proposed A303 tunnel.	
6.4.4	<p>If the combination of extensive vertical major fractures and fissuring in the Newhaven and Seaford Chalk horizons (particularly in Stonehenge Bottom and eastwards) are adversely affected by the tunnel construction, especially with extensive penetration of bentonite slurry/grout, nearby groundwater abstractions and springs could well be permanently derogated.</p> <p>The creation of any degree of groundwater barrier, as a result of tunnel construction, could adversely affect local private abstractors, and even the discharge of the Blick Mead/Amesbury Abbey springs to the east.</p> <p>Using groundwater modelling nodes (as utilised in ModFlow software, and similar) with 250m spacings, only about 15 data points are established to predict groundwater conditions along the tunnel line.</p> <p>This poor level of detail is totally inappropriate and insufficient to investigate the complexity of groundwater movement, recharge, flow and discharges at the necessary scale and detail requirements of the 3.3km long tunnel.</p> <p>If the crown of the tunnel is located below the Stockbridge Rock, i.e. at approx. 50m BGL (55mAOD), with the road level in the tunnel at 36.3m AOD, the tunnel would be approximately 15m deeper than is currently shown in Highways England drawings. The current levels shown in the drawings (HEng. DCO Application: Documents 2.7-Engineering Section Drawings; No.7 of 24) show the crown level of the tunnel below Stonehenge Bottom at 70m AOD, and the road level at 51.3mAOD.</p> <p>Therefore, if tunnelling goes deeper than proposed to the west and east of Stonehenge Bottom, the Stockbridge/Whitway Rock high</p>	<p>Please see response to item 11.1.3 in the Comments on any Further Information at deadline 4 [REP5-003].</p> <p>Modelling has been carried out at an appropriate scale to simulate the effects of the Scheme on regional groundwater flow and sensitive receptors. The modelling has been reviewed and considered appropriate by the Environment Agency and Wiltshire Council’s peer reviewers.</p> <p>This model has been refined in the area of the tunnel with aquifer property data from pumping tests and preferential flow horizons have been considered using geological, geotechnical and geophysical data.</p> <p>The model with a 250m grid is conservative because if the tunnel crosses part of a 250m model cell the entire cell is set to block a proportion of flow. In a refined grid with a mesh of 50m or 20m, less of the aquifer would be blocked and the results would be less precautionary. The precautionary approach to the modelling used is therefore robust and sound.</p> <p>Please refer to the Applicant’s response to the Examining Authority’s Written Questions submitted at deadline 6 [REP6-028, Question Fg.2.33].</p> <p>The Environmental Statement has assessed the impacts on groundwater flows as a result of the Scheme, including the tunnel. A precautionary approach was taken in respect of the tunnel alignment and depth which concluded that no likely significant effect is to occur to groundwater from the Scheme. The Outline Environmental Management Plan [REP6-011] includes controls in respect of groundwater impacts, particularly by reference to the obligation in item MW-WAT10 to produce a Groundwater Management Plan in consultation with the Environment Agency. This would include a risk assessment in relation to the final design, as well as a monitoring regime with trigger levels and actions. There are therefore sufficient controls in place to ensure any impacts on groundwater flows would be mitigated adequately. It should also be added that the Environment Agency has further controls by</p>

	<p>permeability zone is likely to be intercepted, but not in the major fracture zone below Stonehenge Bottom.</p> <p>The consequence of any such variations to the published Limits of Deviation has not been investigated, neither by site investigation drilling nor groundwater monitoring and testing, and consequently has not been part of any detailed and relevant groundwater modelling</p>	<p>virtue of the protective provisions for its benefit contained in Part 5 of Schedule 11 to the draft Development Consent Order [REP6-005].</p>
6.4.5	<p>[In response to Fg.2.40]</p> <p>The Planning Inspectorate (PI) files and the PI Public Records are the best and most accurate source of information as to the dates and details of hearings and approvals for such projects and we have not accessed them to give specific answers to the ExA's Questions.</p> <p>Numerous applications of 3-D geological ground modelling showing geotechnical and hydrogeological features as they change throughout a block of ground in which excavations (especially tunnels) are intended to pass, have been used increasingly over the past 10 to 15 years.</p> <p>It is now a natural logical step for integrating complex ground information, to assist in the understanding of complex, varying and inter-related geoscientific data pertinent to a major civil engineering excavation project.</p> <p>These techniques and approaches have been used in the UK as follows:</p> <p>Initiation of many of the UK examples where such 3-D ground models have proven useful pre-date the new NSIP processes introduced by the Planning Inspectorate by way of The Planning Act 2008.</p> <p>It should also be noted that a 3-D geological model, developed by the British Geological Survey, was the basis for the development of the Wessex Basin and associated groundwater models of the Southern English Chalk aquifers, as described by Soley et al. (2012).</p>	<p>See response to item 6.4.1.</p>

Since the proposed A303 road and tunnel project are being assessed under the new NSIP process, the Infrastructure Conditions of Contract and/or the Institution of Civil Engineers (ICE) “New Engineering Contracts”, NEC 3 and NEC 4, Terms of Contract and conditions must apply.

In these systems and procedures there are two highly relevant protocols. These are the Unexpected Ground Conditions clauses (ICE 7 Clause 12 et seq.) and the principle of using “Best Available Technology Not Entailing Excessive Cost”.

In addition, the recently adopted Building Information Modelling approach, now used on most major projects in the UK, would predicate the use of 3-D Ground modelling, prior to the tendering stage especially where complex ground conditions are expected.

Failure to follow the above systems could not only result in inflated costs of such a project due to extensive claims against the proponent/client but also considerable delays when these “unexpected conditions” result in costly remedial measures, and indeed could draw any proponent/client into massive legal costs for not having complied with the requirement of presenting all known available data to prospective tenderers, and especially the successful bidding contractor, in the best and most complete format so as to enable an accurate and economic bid (in both fiscal and project management terms), especially when the Client is the UK Government/The Public Purse.

The following comments on the shortcomings of Highways England ground investigations and characterisation of the block of ground likely to be affected by the proposed road and tunnelling works, can therefore be made:

1. 3-Dimensional ground modelling is an essential element of the site investigation data presentation.

6.4.6	<p>[In response to Fg.2.40]</p> <p>2. Groundwater modelling, on a scale appropriate to the dimensions of the area likely to be affected by any changes in groundwater conditions which may result from and/or be caused by construction, is vital, and has not been achieved.</p>	See responses to items 6.1.3, 6.4.2, 6.4.3, 6.4.4 and 6.4.11.
6.4.7	<p>[In response to Fg.2.40]</p> <p>3. Grouting trials, in similar fractured Chalk bedrock should be undertaken to assess the expected extent of penetration due to both closed face slurry/bentonite tunnelling and possible emergency surface or tunnel-based grouting.</p>	<p>See response to item 11.1.4 in Comments received at deadline 4 [REP5-003].</p> <p>The properties and characteristics of the grout will be carefully selected to limit grout migration, dilution and other effects from groundwater and fissures in the chalk. This would be undertaken in accordance with best practice and as part of the risk management of the tunnelling works and will be controlled pursuant to item MW-WAT9 of the OEMP [REP6-011] which requires EA approval of the materials used for ground treatment when more details of the construction methodology will be known.</p>
6.4.8	<p>[In response to LV.2.4]</p> <p>i. How is the CPRE analysis derived? Is it based on noise measurement or on other factors?</p> <p>See essay below for detailed description and critique of the CPRE method. There are, in fact 42 features which the CPRE method uses and each is considered along with a weighting to attempt to allow for relative importance of each. Noise and visual appearance are the two key features which are considered, but the way in which noise (or sound) is considered fails to take account of the importance of natural sounds. The method was valuable as a campaigning tool, but beyond that, is so flawed that it cannot reliably be used to assist with planning decisions. The essay in Appendix A below provides a detailed explanation of why this is so and considers, amongst other documents and studies, the Cranborne Chase and West Wiltshire Downs Area of Outstanding Natural Beauty (AONB) Office</p>	<p>The Applicant has set out in their response to Written Question LV.2.4 [REP6-030] a range of factors which the CPRE method was based upon, including noise, and the Applicant has set out in the Applicant's written summary of oral submissions from ISH5 regarding Noise and Vibration [REP4-033] that there are limitations with the CPRE methodology. However, the Applicant considers that the CPRE mapping [APP-083] can be reviewed as part of the baseline analysis of tranquillity, with knowledge of its limitations, because as noted by the Stonehenge Alliance's statement on tranquillity and noise [REP2-132] "the CPRE approach provides a useful means of identifying relative tranquillity across England, [although] it is not so helpful for identifying how individuals will experience (or report) particular places." The CPRE method and its subsequent mapping [APP-083] have only formed part of the baseline review by The Applicant. The Applicant has not undertaken the assessment of tranquillity based upon the CPRE method; it has based this on their own field work observations and review of the information within ES Chapter 9 [APP-047]. As set out at in the Applicant's written summary of oral submissions from ISH 5: Noise and Vibration [REP4-033], in relation to agenda item 4(iv), the Applicant is not going to comment on the Stonehenge Alliance methodology and information presented in Appendix A, as it is the</p>

	publication, "Tranquility Mapping Ground Truthing Methodology & Interim Report".	<p>conclusions which are considered to matter, not the individual approach to tranquillity and "given the overall conclusions of Mr Bentley and the Applicant are not too dissimilar".</p> <p>As such, the Applicant considers that the CPRE mapping can be referred to in a baseline review of published information on tranquillity and that it is not 'so flawed that it cannot reliably be used to assist with planning decisions'. As stated above, the Stonehenge Alliance conclude that the CPRE method still "provides a useful means of identifying relative tranquillity across England".</p>
6.4.9	<p>[In response to LV.2.4]</p> <p>ii. Have attempts been made to map projected tranquillity with the Scheme in place?</p> <p>Yes, Clive Bentley's evidence provides such maps, although they only cover the area immediately around the henge.</p> <p>Any attempt to use the CPRE method would be bound to provide an unreliable output since it does not take account of the sounds made by people, incorrectly deals with road traffic noise, has a grid size of 500 x 500m and fails to properly account for a number of other important factors which affect tranquillity.</p>	<p>As stated in the Applicant's response to Written Question LV.2.4 item ii [REP6-030], no mapping of the projected tranquillity with the Scheme in place has been undertaken within APP-045. This is because the assessment of the change to tranquillity has been covered by the written narrative of the impacts to the local landscape character areas as part of the Applicant's assessment of tranquillity.</p> <p>The Applicant has set out in its written summary of oral submissions made at ISH 5: Noise and Vibration [REP4-034] that it does not disagree that there are limitations with the CPRE methodology. However, the CPRE mapping [APP-083] is just one of several studies reviewed as part of the baseline analysis of tranquillity and can be used with knowledge of its limitations. Other sources of information used for the Applicant's tranquillity assessment included published landscape character assessments, data obtained from ES Chapter 9 [APP-047] and principally from the winter and summer field work.</p>
6.4.10	<p>[In response to LV.2.4]</p> <p>iii. Have attempts been made to analyse tranquillity in terms of serenity, calmness, and peace rather than the impact of noise, qualities which might be affected by the proximity to major road cuttings or junctions, whether or not accompanied by noise?</p> <p>Clive Bentley's method considers tranquillity per se. Although it uses sound level and character to do this, it has been found to provide a reliable indication of people's perceptions of tranquillity, rather than their perceptions of noise. The research behind the method compared values for the measured parameters against surveyors'</p>	<p>Please refer to the Applicant's response to Written Question LV.2.4 [REP6-030] which sets out that tranquillity has been considered in terms of these factors. As set out in its written summary of oral submissions made at ISH 5: Noise and Vibration [REP4-034], in relation to agenda item 4(iv), the Applicant does not intend to comment on Mr Bentley's method as the conclusions and those of the Applicant are not too dissimilar; and it is not a question of methodology more so about conclusions. Mr Bentley concludes in paragraph 5.12 the removal of the road 'will result in considerable improvement in tranquillity in the wider area', which the Applicant agrees with. The point of difference between the Applicant and Mr. Bentley is covered in the following response to item 6.4.11 below.</p>

	subjective perceptions of tranquillity (taking all factors into consideration) and thus covers these descriptions.	
6.4.11	<p>[In response to Ns.2.1]</p> <p>Do you consider that tranquillity will be achieved at the Stones as a consequence of the scheme?</p> <p>No. The level of sounds around the Stones is relatively high and the dominant source is the sounds generated by visitors: parties of schoolchildren, audio guides and just the general speech (at a normal level) from the sheer volume of visitors. Although the road is audible around most of the site, people do not seem to notice it (unless prompted) and this is not surprising as has been measured around the site at eleven locations at between 45 and 51 dB LAeq. The sounds of people at these same locations was between 49 and 65 dB, LAeq. (Time periods for measurements were between 5 and 10 minutes and each location was visited twice on a day which was described by the Site Operations Manager as “moderately busy”). Even ignoring the analysis of the data using the Natural Tranquillity Method, it is impossible not to conclude that the removal of the road traffic noise would have a negligible impact on tranquillity (or on noise levels) at the henge.</p>	<p>With reference to the Applicant’s response to Written Question Ns.2.1 [REP6-031], the Applicant “agrees that visitors are an important noise source which would have an impact in terms of the level of tranquillity experienced at this location. As a result, the improvement in tranquillity due to the major reduction in traffic noise at the Stones and in their immediate vicinity as a result of traffic using the existing A303 being redirected into the tunnel, will be less than at locations in the wider WHS where traffic noise from the A303 is dominant. Nevertheless, the major reduction in road traffic noise, combined with the removal of the sight of road traffic due to the tunnel (given that tranquillity levels are based on not just noise, but other factors such as landscape and visual impacts), cannot have anything other than a beneficial effect on tranquillity at the Stones and their immediate vicinity”.</p> <p>The Applicant does not therefore agree with the suggestion that ‘it is impossible not to conclude that the removal of the road traffic noise would have a negligible impact on tranquillity (or on noise levels) at the henge’. The Applicant considers that the change would be greater than a negligible impact due to the major reduction in road noise traffic and the visible removal of road traffic on the existing A303.</p>
6.4.12	<p>[In response to CH.2.1. on consultation/agreement/approval]</p> <p>1. The statutory bodies have not, in our view, shown themselves in the case of the A303 Stonehenge scheme to “carry the greatest expertise” or to “operate in a completely independent and objective manner”.</p>	<p>The Applicant would refer the Examining Authority to Historic England, Wiltshire Council, the National Trust and English Heritage Trust to respond to these accusations.</p> <p>The Applicant notes, however, that members of HMAG are recognised experts in the archaeology and OUV of the Stonehenge, Avebury and Associated Sites WHS and in lithic assemblages; have written high-level HIAs with regards to the developing A303 Scheme and its impacts on the OUV of the WHS to inform their positions and stance; have represented ICOMOS on Advisory Missions internationally and currently manage the Stonehenge Visitor Centre and the internationally iconic Stonehenge monument and its surrounding landscape.</p> <p>It is also noted that the bodies referred to are under various statutory obligations and duties, and Highways England’s position is that the</p>

		suggestion that those bodies have not acted independently and objectively and utilising appropriate expertise is unfounded.
6.4.13	<p>[In response to CH.2.1. on consultation/agreement/approval]</p> <p>2. It is clear, from the evidence brought to the Examination by ICOMOS-UK and acknowledged experts in the field, that these experts disagree with statutory bodies represented at the Examination and HMAG (largely representatives of statutory bodies) about the findings of the HIA and the unsatisfactorily-explained separation of the cultural heritage of the WHS from its landscape when the two are obviously inseparable. The Scientific Committee was formed specifically to advise the HMAG and the Applicant who lack relevant expertise in the archaeology of the WHS. Members of the Scientific Committee who have the “required specialist skillset or expertise in a specific aspect of the landscape of the Stonehenge WHS” (Committee terms of reference) have given strong representations to the Examination in opposition to the Scheme and proposals for archaeological work prior to scheme construction. It is understood that other Scientific Committee members are similarly unhappy about the Scheme proposals (pers. comm.)</p>	<p>The Applicant maintains that the HIA [APP-195] has been undertaken by recognised experts in the archaeology of the WHS and who have previously written HIAs related to other developments within the Stonehenge, Avebury and Associated Sites WHS, including the Visitor Centre and the Stonehenge Environmental Improvements Project.</p> <p>See the Applicant’s response at item 34.1.1 of its Comments on submissions received at deadline 4 [REP5-003]. With respect to the expertise of HMAG, please see the above response to item 6.4.12. The Applicant rejects the suggestion that HMAG and the Applicant lack the relevant expertise.</p> <p>The Applicant has undertaken the HIA in line with the appropriate ICOMOS Guidance on Heritage Impact Assessments for Cultural World Heritage Properties (ICOMOS 2011). HMAG members agree that the HIA has been undertaken in accordance with the HIA Scoping Report (which was deemed by the UNESCO / ICOMOS Mission 2018 to be appropriate) and with the ICOMOS Guidance 2011.</p> <p>Scientific Committee members hold their own independent views with regards to the Scheme as set out in the Scientific Committee’s Terms of Reference and are, of course, entitled to express those views. The views of the Scientific Committee have been sought throughout the Scheme development and the development of the Detailed Archaeological Mitigation Strategy. The Applicant notes that not all members of the Scientific Committee are opposed to the Scheme, some support it, and have provided written submissions in that regard to the Examination.</p>
6.4.14	<p>[In response to CH.2.1. on consultation/agreement/approval]</p> <p>3. The Stonehenge Alliance has already expressed serious concerns about the independence and objectivity of the statutory bodies in our Written Representation on “Concerns about consultation on the Scheme” (REP2-133), Section 5: “Objectivity of the scheme assessment and issues of conflict of interest”.</p>	See response to item 6.4.12 above and items 55.2.22 and 55.2.23 in the Comments on Written Representations report [REP3-013]. .

6.4.15	<p>[In response to CH. 2.8. Blick Mead, Vespasian's Camp, and Amesbury Park RPG Settings]</p> <p>1. The Stonehenge Alliance mentions, in our Written Representation on "Heritage and the Historic Environment" (REP2-136), the potential impacts of the Scheme on the settings of Vespasian's Camp and other nearby heritage assets including the WHS in its eastern part.</p> <p>2. We are in full agreement with the concerns set out by the ExA in this Question. We are also concerned about the visual and aural impacts of the scheme on the ancient Avenue in this area: the topography and monuments seen from its path to/from the river are very likely to have had meaning for those who constructed and used it or looked towards it, possibly during ceremonial events, from other parts of the landscape, such as the heights of Vespasian's Camp.</p>	<p>The Applicant has provided its response to this Second Written Question at deadline 6 [REP6-022; CH.2.8] and responded to Stonehenge Alliance's Written Representation in this regard in its response at deadline 3 [REP3-013; paragraphs 12.3.109 to 12.3.114].</p> <p>The Applicant notes that the existing A303 currently severs the Avenue just to the east of King Barrow Ridge and has a Large Adverse effect on this scheduled monument. In comparison the Scheme will result in a Large Beneficial effect on the Avenue [see the HIA, APP-195; pages 354-356] through the removal of the existing severance caused by the current A303, the removal of much of the existing aural and visual intrusion of traffic on the A303, the restoration of the physical connectivity along much of this important prehistoric ceremonial route, and improvements to the integrity and setting of the monument.</p>
6.4.16	<p>[In response to CH.2.9.i.]</p> <p>A. The Stonehenge Alliance does not have the expertise to comment on the questions raised here. However, it is our opinion, expressed in our comments on the dDAMS (REP4-024) at Deadline 5, that without full recovery of archaeological evidence from the topsoil and from sub-soil features, the research questions posed cannot be properly answered.</p>	<p>The Applicant has provided its response to this Second Written Question at deadline 6 [REP6-022; CH.2.9]. With regard to the need for full recovery of archaeological evidence from the topsoil and sub-soil features, the Applicant continues to consult with HMAG members to identify a reasonable and proportionate approach to mitigation. This includes consideration of the appropriate sample sizes for excavation of human made features and tree hollows, both inside and outside of the WHS and an appropriate research-led strategy for the lithic assemblages in the ploughsoil [see the draft DAMS REP6-013 paragraphs 6.3.11 – 6.3.18 and 6.3.36 – 6.3.50].</p>
6.4.17	<p>[In response to CH.2.9. ii.]</p> <p>Stonehenge Alliance response (with input from Dr George Reeves and Rupert Thornely-Taylor)</p> <p>1. To monitor vibration and movement accurately during operation of the TBM, it would be necessary first to understand fully the strength and competence of the rock through which the tunnels would be bored, including the rock conditions above and below the tunnels. The Applicant has not yet demonstrated such an understanding. This could be aided by the preparation of a 3-D</p>	<p>The Applicant's response to this was included as discussed at Issue Specific Hearing 4, Item 5.1 (deadline 4 submission - 8 30.4 - Written summaries of oral submissions put at Flood risk, Groundwater, Geology and Waste hearing on 11th June 2019 [REP4-032]) and subsequently as is set out in Written Question Fg 2.40 & 2.51 [REP6-028]. In summary, Highways England agrees that the detailed Noise and Vibration Management Plan required by MW-NO13 of the Outline Environmental Management Plan (OEMP) [REP6-011] will consider the geology in conjunction with other relevant factors e.g. depth and location of the TBM.</p>

	<p>model of what is acknowledged to be complicated geology of variable rock quality, with the existence of major fissures as well as fissures and voids of unknown size and extent.</p>	<p>The use of a 3D model at this stage of the preliminary design has also been addressed in response to questions Fg 2.40 & Fg 2.51 [REP6-028] which confirms the Applicant's view that the information presented in the Environmental Statement is more than sufficient at this stage of the consents process and that a 3D model is not required. This is further covered in the response to Stonehenge Alliance at deadline 5 [REP5-003] items 11.1.1 & 11.2.56 which confirms as follows:</p> <p>a. The Applicant considers that a proportionate approach has been taken to characterise the variable nature of the geology employing experts in this field, including Professor Rory Mortimore, and does not agree that a 3D model is necessary at this stage.</p> <p>b. In developing the preliminary design provided in support of the Development Consent Order (DCO), the Applicant has followed best practice as embodied in the Association of British Insurers / British Tunnelling Society Joint Code of Practice for the Risk Management of Tunnel Works (ACOP) to:</p> <ul style="list-style-type: none"> - Undertake hazard identification and the management of risk to ensure their reduction to a level 'as low as reasonably practicable' as an integral consideration in the design, procurement and construction of the tunnel works. - Promote and secure best practice for the minimisation and management of risk as part of the Insurance of the works. - Undertake suitable and sufficient site investigation phased appropriately to the pertaining physical and geological environments. <p>Whilst the Applicant recognises the risks associated with the geology and hydrogeology at Stonehenge and the unique nature of the archaeology within the WHS, a 3D ground model is not considered necessary at this stage to inform the detailed design of the monitoring strategy and has not been considered necessary at the pre-consents stage of comparable major tunnelling infrastructure projects, (Crossrail, Silvertown, Thames Tideway) including in locations with chalk.</p>
6.4.18	<p>[In response to CH.2.9. ii.]</p> <p>2. A full understanding of sub-surface conditions could help in devising suitable monitoring procedures fit for the specific location and conditions that would be encountered. There is no method</p>	<p>The Applicant's response is set out in Written Question Ns.2.7 [REP6-031]. In summary, Highways England agrees that there is no standard method of vibration monitoring for heritage assets although the guidance in various British Standards is of relevance (BS 7385: 1993, BS ISO 4866:2010, and BS 5228: 2009+A1: 2014 as referenced in MW-NOI5 of the OEMP [REP6-011]).</p>

	<p>known to us by which to judge the method proposed by the Applicant and it is therefore not possible for us to answer the ExA's questions on it. Rupert Thornely-Taylor, vibration specialist, has advised us that</p> <p>"A methodology for monitoring would have to be worked out as there are major uncertainties associated with measurement of vibration in soil, mainly due to the effect of transducer attachment." (email to K. Fielden, 22.7.19)</p>	<p>The precise details of the vibration monitoring methodology will be set out in the Noise and Vibration Management Plan required by MW-NOI3 of the Outline Environmental Management Plan (OEMP) [REP6-013]. This will include specific details in terms of the choice of transducers, method of coupling, measurement locations, measurement durations, etc.</p>
6.4.19	<p>[In response to CH.2.9. ii.]</p> <p>3. Clearly, there is no point in monitoring for movement if there is uncertainty as to how much movement would cause damage and what could be done to prevent it. Highways England has not provided a convincing methodology for monitoring or preventing damage from vibration or settlement (the latter said to be up to 2–3cm.). In our view, there is a possibility that settlement could be greater, if voids are caused to migrate. There is no detailed knowledge of the full archaeological potential along the line of the tunnel, so it is not possible to say how much movement would cause damage to what; nevertheless, a precautionary approach needs to be taken.</p> <p>In the opinion of Rupert Thornely-Taylor,</p> <p>"If monitoring reveals levels of vibration from the TBM which are likely to have significant effects on archaeological remains, no mitigation is available other than stopping the TBM. Reducing its rotation speed or thrust force have a very small effect." (email to K. Fielden, 22.7.19)</p>	<p>The Applicant refutes that there is not a 'detailed knowledge of the full archaeological potential along the line of the tunnel'. The line of the tunnel has been covered in the ES [APP_044] and the HIA [APP-195] and has regard to geophysical surveys undertaken by the Stonehenge Hidden Landscape Project. To undertake intrusive trenching above the tunnel to ground truth the geophysical survey results would be contrary to the principles of the Archaeological Evaluation Strategy agreed with HMAG and the Scientific Committee, specifically:</p> <ul style="list-style-type: none"> • <i>'Utilise the considerable information already available from prior investigations where appropriate and relevant before commissioning any new works. Only undertake further surveys when the evidence from previous surveys has been reviewed and found to be in need of augmentation'</i> • <i>'Only undertake extensive intrusive works in areas where it is probable that there will be a direct impact through development'</i> • <i>'Only undertake the minimum appropriate intrusive field work where it is necessary to inform research questions and the design process. Field work should have the minimum impact possible.'</i> <p>Highways England refers the Examining Authority to our response at ISH5 Noise and Vibration Agenda item 6 (iii) [REP4-033] regarding the archaeological remains that have been identified above the tunnel and the minimal impacts predicted from the low-level vibration caused by the TBM and predicted ground settlement.</p> <p>Experience from the Crossrail tunnelling project identified that vibration generated by a TBM is sensitive to various parameters, including the distance to the cutting face, geology at the cutting face, geology along the transmission path, TBM type, thrusting pressure, rotational speed, cutter disc</p>

		<p>arrangement, etc. Therefore, whilst it is agreed that the main focus of the mitigation strategy is in the choice of tunnelling method and TBM there are measures that can be implemented during the works.</p> <p>The issue of void migration was covered in the response given to ExA's first Written Question Fg.1.5 at deadline 2 [REP2-031]. The approach to dealing with the risk of encountering open voids within the chalk during tunnelling requires detailed consideration of the most appropriate tunnel boring method to use based on an assessment and understanding of the expected geological and hydrogeological conditions. A closed-face Tunnel Boring Machine (TBM) (secured through item D-CH32 of the OEMP [REP6-011]) is considered to be the best option for tunnelling in the chalk geology found in this location as it provides greater control on settlement. As part of the safe working plan developed during detailed design, the contractor will develop a suite of tool box items to allow further investigation and assessment during construction to identify the need for ground treatment ahead of the tunnel face to deal with risks including the presence of voids. Where the need for ground treatment is identified this will be undertaken from inside the tunnel bore where it is safe and practicable to do so in preference to surface intervention.</p>
6.4.20	<p>[In response to CH.2.9. ii.]</p> <p>4. Dr Reeves advises:</p> <p>"Problems encountered during tunneling advances, causing significant halts in machine progress and grout pressure maintenance (for example when encountering a horizon of large flint boulders, or simply a TBM breakdown), could trigger ground movements, even up to ground surface level. When this occurs, significant damage to surface features (archaeological and others) could occur. Once this has happened, it is too late to rectify, and monitoring will only indicate the extent of damage. To obviate such eventualities, it is therefore necessary to understand the ground conditions below this World Heritage Site in great detail. This again indicates the necessity of creating a fully populated and informed 3-dimensional Ground Model for the whole tunnel and road route." (email to K.Fielden, 26.7.19)</p>	<p>The Applicant agrees that to obviate each of these risks during tunnelling and inform the detailed design of the TBM will require further ground investigation; which will be controlled through the requirements in the dDCO and the OEMP. However, as stated previously under item 6.4.17, a proportionate and staged approach has been undertaken with the current investigation that is considered sufficient to inform the Environmental Statement and is in accordance with best practice. The Applicant does not agree that it is necessary nor is it usual practice at this stage to 'create a fully populated and informed 3-dimensional Ground Model for the whole tunnel' as suggested by Dr Reeves.</p>

6.4.21	<p>[In response to CH.2.9. ii.]</p> <p>5. It should also be borne in mind that there could be movement of the tunnel itself when in operation in the future, possibly as a result of local settlement arising from vibration from traffic, rock solution or changes in groundwater movement over time.</p>	<p>As detailed in the Highways England response Written Question Ns.1.19 [REP2-034], operational ground-borne vibration impacts have been scoped out of the Assessment. This was detailed in Table 9.2 of Chapter 9 of the ES [APP-047]. DMRB identifies that the potential for significant ground-borne vibrations due to road traffic is limited to locations close to heavily trafficked roads with a poor road surface. The A303 Amesbury to Berwick Down scheme will be constructed with a new surface and, in line with standard Highways England maintenance regimes, will undergo regular routine maintenance to ensure the quality of the surface is maintained over time.</p> <p>During the operation of the tunnel itself, there will be a regular schedule of structural inspection and planned maintenance as standard practice in compliance with the Design Manual for Roads and Bridges: Volume 2 Highway Structures Design: Section 2 Special Structures: Part 9 BD 78/99 Design of Road Tunnel. This will include as necessary an inspection of the lining for any unforeseen movement of the tunnel due to the geology or hydrogeology.</p>
6.4.22	<p>[In response to De.2. Design]</p> <p>DE.2.1. OEMP, Chapter 4: Detailed Design [REP4-020]</p> <p>A. We agree that the title of this chapter should be amended and its scope widened to include areas outside the WHS affected by the Scheme. It needs to be borne in mind that the boundary of the WHS might be extended in future so that the same attention should be given to detailed design both within and without the WHS. The Scheme also lies within a designated Special Landscape Area.</p>	<p>Please see the Applicant's response to Written Questions De.2.1 and De.2.2 [REP6-023] which addresses this comment.</p>
6.4.23	<p>[In response to De.2.2]</p> <p>De.2.2. OEMP, Chapter 4: Detailed Design - Design Vision [REP4-020]</p> <p>A. The Stonehenge Alliance agrees that an overall design vision for the WHS and its setting is necessary and that for a Scheme of international importance such as this, it is not appropriate to leave the design to the contractor. Ideally, we would wish to see a design vision that is compatible with the Vision of the WHS Management</p>	<p>Please see the Applicant's response to Written Question De.2.2 [REP6-023] which address this comment. In addition to this response, the Applicant can confirm that one of the Vision's overall aims is Respecting and Responding to the Historic Landscape, which includes due consideration of the objectives of the WHS Management Plan, as stated within Section 4.2.6 a) of the OEMP [REP6-011] and in the central section the aim is to sustain the OUV of the WHS.</p>

	<p>Plan which has been agreed by all key stakeholders, including Wiltshire Council, Historic England and English Heritage and forwarded unchanged (presumably agreed) by DCMS to UNESCO. (Management Plan, Vision, p.10)</p> <p>http://www.stonehengeandaveburywhs.org/assets/2015-MANAGEMENT-PLAN_LOW-RES.pdf</p>	
6.4.24	<p>[In response to De.2.3]</p> <p>De.2.3. OEMP, Chapter 4: Detailed Design [REP4-020], para.4.4.3</p> <p>A. We consider that there should be consultation on the fencing or any other safety measures preventing access to the cutting. It is vital that whatever measures are required for safety are not only effective but also low-key, with minimal impact in views over the wider landscape. The most appropriate measures might be more expensive which is, in part, why they should be consulted on and agreed beforehand.</p>	Please see the Applicant's response to Written Question De.2.3 [REP6-023] which addresses this comment.
6.4.25	<p>[In response De.2.4]</p> <p>DE.2.4. OEMP, Chapter 4: Detailed Design [REP4-020], para.4.4.4.</p> <p>A. The Alliance considers that there should be consultation on the appearance of i) the River Till viaduct; ii) Countess flyover; and iii) Green bridges. Very little detail has been given in the DCO application documents on these substantial features which would have a major impact on their surroundings, along with associated safety and other measures such as noise and lighting screens.</p>	Please see the Applicant's response to Written Question De.2.4 [REP6-023] which addresses this comment.
6.4.26	<p>[In response to Fg.2.39. Geology and soils]</p> <p>1. The Stonehenge Alliance has serious doubts about the Applicant's assurances that archaeological remains can be protected from any impacts arising from vibration and settlement, notably during use of the TBM but also in tunnel operation. We set out our latest observations on these matters under ExQ. CH.2.9; Ns.2.7 and Ns.2.8, below.</p>	See response to items 6.4.16, 6.4.17, 6.4.18, 6.4.19, 6.4.20 and 6.4.21 above and items 6.4.36 and 6.4.37 below.

6.4.27	<p>[In response to Fg.2.39. Geology and soils]</p> <p>2. We do not consider that the Applicant's documentation to date provides adequate mitigation or protection for archaeology from tunnelling. There are requirements in the OEMP that monitoring strategies for vibration and ground movement will be prepared; the Heritage Management Plan is to show how the historic environment will be protected; and the contractor is to develop contingencies and identify measures to ensure the protection of such assets. No detail is given on how the assets are to be protected, thus "securing strategies" gives no confidence at this stage that archaeology would be protected in the event of vibration or settlement.</p>	See response to items 6.4.28, 6.4.36 and 6.4.37 below.
6.4.28	<p>[In response to Fg.2.39. Geology and soils]</p> <p>3. A thorough knowledge of the ground conditions along the line of the tunnel still appears to be lacking; while proposals to slow down the TBM and introduce grouting, should adverse impacts of vibration or settlement become apparent (as detailed in our response (point 4) to ExQ2. CH.2.9.ii, above) would not be effective in preventing damage. In the absence of established monitoring and mitigation methods for preventing damage to archaeology from tunnelling and given the unreliable stability of the Chalk Rock at Stonehenge, we are unable to recommend the use of the methods proposed. Nor are we able to advise on any alternatives, for the same reasons.</p> <p>4. We hope that the ExA would wish to have confidence at the DCO stage in the strategies to be employed and that such important matters ought not to be left to the contractor</p>	<p>See response to items 6.4.16, 6.4.17, 6.4.18, 6.4.19, 6.4.20 and 6.4.21 above and items 6.4.36 and 6.4.37 below.</p> <p>During the development of the preliminary design in support of the DCO, the project team have been subject to an independent Peer Review by an acknowledged team of tunnelling experts including Mike King, Steve Woodrow and Professor Colin Eddie. This Peer Review process has confirmed the project's decision to use a Closed-face TBM for the construction of the main tunnel bores to reduce the possible risks identified; this is not a decision that will be left to the contractor (as it is secured through D-CH32 in the OEMP).</p> <p>In determining the actual details of the monitoring and mitigation measures, this is something that the specialist contractors can provide during the development of the detailed design and is indeed standard practice on tunnelling projects, but within the framework of the requirements set out in the OEMP and the DAMS, such as the Ground Movement Monitoring Strategy, the Noise and Vibration Management Plan and the Heritage Management Plan.</p>

6.4.29	<p>[In response to LV.2.1.i.]</p> <p>A. It is important that the quotation on page 23 of the HIA is taken as a whole:</p> <p>“The Scheme has been developed to avoid known concentrations of archaeological remains that make a significant contribution to the OUV of the WHS.”</p> <p>It is not simply “concentrations of archaeological remains” that contribute significantly to the OUV of the WHS, as the criteria and list of attributes of OUV make clear (see WHS Management Plan, pp. 26-34).</p> <p>By avoiding “known concentrations of archaeological remains” the scheme does not take into account the possibility that there might be unknown concentrations of archaeological remains on the chosen route – as indeed has proved to be the case in the likely identification of settlement traces in the area of the proposed western road cutting.</p>	<p>The Applicant refutes that the HIA has been undertaken with regard to ‘simply “concentrations of archaeological remains” that contribute significantly to the OUV of the WHS’. The HIA has considered the impacts and effects of the Scheme on all seven attributes that convey the OUV of the WHS, its Integrity and Authenticity in great detail. The HIA has been undertaken in line with the ICOMOS Guidance 2011 and following the method and approaches set out in an HIA Scoping report that the UNESCO/ ICOMOS Mission 2018 deemed to be appropriate.</p> <p>The Scheme has been subject to a comprehensive archaeological evaluation programme which provides a robust baseline against which the Scheme impacts on heritage assets have been assessed (in the ES [APP-044]) and the impacts of the Scheme on the Attributes of OUV, Integrity and Authenticity of the WHS have been assessed (in the HIA [APP-195]). The risk of finding further ‘unknown concentrations of archaeological remains on the chosen route’ has been minimised as far as possible through the extensive and comprehensive archaeological evaluation programme.</p> <p>Regarding the statement that within the western road cutting it has been ‘proved to be the case in the likely identification of settlement traces in the area’, the Applicant disagrees with this assertion – and refers the Examining Authority to our response above in item 6.3.1.</p>
6.4.30	<p>LV.2.1.iii.</p> <p>A. One long barrow was discovered in 2017 while another, known about but flattened by ploughing, was re-identified. The group of long barrows is a uniquely dense cluster of such monuments around the head of a dry valley which descends to Stonehenge Bottom and thence to the Avon. Their interconnectedness is obvious but the reasons for their spatial disposition are yet to be fully explored. Future research might provide answers but major intervention in the landscape could preclude better understanding. The proposed physical interruption and destruction of the topography within this group of barrows displays extreme absence of sensitivity to what makes the WHS of OUV to mankind.</p>	<p>The significance of these monuments in the landscape, their relatively dense concentration, their location along the east-west Wilsford/Normanton coombe (dry valley) and their layout with respect to local topography have been considered by the Applicant as part of the ES [APP-044, 6.6.25–33; 6.6.93–96] and HIA [APP-195, paras. 6.9.8–12].</p> <p>The Applicant refers to its response to Second Written Question LV.2.1(iii) [REP6-030], which provides:</p> <p>The HIA cites Roberts et al. 2018 (Roberts, D., Valdez-Tullett, A., Marshall, P., Last, J., Oswald, A., Barclay, A., Bishop, B., Dunbar, E., Forward, A., Law, M., Linford, N., Linford, P., López Dóriga, I., Manning, A., Payne, A., Pelling, R., Powell, A., Reimer, P., Russell, M., Small, F., Soutar, S., Vallender, J. and Worley, F. 2018. Recent Investigations at Two Long Barrows and Reflections on their Context in the Stonehenge World Heritage Site and Environs.</p>

Internet Archaeology 47. Available at <https://doi.org/10.11141/ia.47.7>.) as follows:

“The landscape setting of long barrows has long been acknowledged to be of importance [...] localised topography [is] key to the alignment of long barrows, rather than cosmological alignments. Work at WS71 [one of the Diamond Group long barrows investigated for the proposed scheme and by Historic England] and more widely by Exon et al. (2000) suggests that inter-monumental views were also important, and the cluster of long barrows around the head of the dry valley between Wilsford and Normanton Downs may suggest an early significance to this area. We have suggested that the Wilsford Shaft may have formed part of this early landscape focus, given various considerations of its dating and sequence, although in the light of the limitations of the evidence this must remain a very tenuous suggestion.” [APP-195, para. 6.9.12].

The HIA notes that:

“It has been widely observed that the spatial and visual associations between round barrows and other pre-existing ceremonial and funerary monuments implies a degree of intentionality in terms of their siting (e.g. Woodward and Woodward 1996; Exon et al. 2000; Lawson 2007). It has been observed that ‘some cemeteries were formed around earlier monuments, as if there was some continuing tie between the builders of the old and new monuments’ (Lawson 2007, 207). In some instances, the barrows may have been constructed directly above earlier hengiform, or related types of monument (e.g. Gaffney et al. 2012; Bowden et al. 2015, 35–6). Amadio and Bishop (2010, 27) state that ‘Each burial or new round barrow was placed deliberately with consideration for existing burials, other monuments and natural features, in locations that were in harmony with the values and significances perceived at that particular time.’” [APP-195, para. 6.9.16].

“Barrows are commonly situated in elevated positions, although they are often located on a ‘false crest’ or just below the highest position (Lawson 2007, 210). The frequency of this distribution, even in areas with few other contemporary monuments, suggests that the topographical position itself was significant. Although many barrows also seem to have a deliberate association with watercourses and valleys (Woodward 2000, 73). Within the Stonehenge landscape and WHS, several of the barrow cemeteries can be

seen to lie in elevated positions overlooking the lower ground, River Avon and dry valleys.” [APP-195, para. 6.9.18].

The western approach has been designed specifically to avoid physical impacts on these assets.

The Scheme has been designed with regard to the results of geophysical survey and trial trench evaluation which identified the ‘Diamond’ longbarrows [REP-044, para. 6.6.256].

The Scheme has also been designed to hide the road and traffic in a retained cutting. This, along with Green Bridge No. 4, aims to limit the effect of the Scheme on the setting of these Asset Groups as far as is practicable.

The Western Portal position has been optimised at the head of the dry valley, avoiding impact upon the scheduled barrow UID 2018/NHLE 1010832 (Wilsford G1).

The proposed additional length of canopy up to 200m long would reduce the visibility of the portal in views from monument groups such as the Winterbourne Stoke Crossroads barrows, the Diamond group and the Normanton Down barrows.

See Highways England’s Comments on any further information requested by the Examining Authority and received at deadline 4 [REP5-003, para 34.1.24] which states:

“The Applicant notes that the ‘two new longbarrows’ referred to are located outside of the red line boundary: they were identified during evaluation work in connection with the 2017 consultation options: the preferred route was selected to avoid these monuments (please see response to LV.2.1 (i) [REP6-030]). The HIA identifies the longbarrows that form the grouping discussed by the Stonehenge Alliance [APP-195, p. 445-449] and considers the effects of the Scheme on the longbarrows both as part of asset groups (in combination with later, Bronze Age round barrows) and in terms of their relationships to each other and to the landscape [APP-195, p. 570]: The longbarrow group is currently severed by the existing A303 and the Scheme assessment finds:

"The scheme would remove the sight and sound of traffic on the existing A303. Whilst the Scheme has been designed to reduce the visual intrusion of

the cutting within the landscape, the new cutting would affect the physical relationships between the long barrows in the western part of the WHS. The proposed Green Bridge Four (the long landbridge) would help to reduce the severance due to the cutting and would maintain physical landscape connectivity in this area, being specifically placed to ensure that the relationships are maintained between the upstanding long barrows in the Winterbourne Stoke Crossroads Barrows (AG12) and the Diamond Group (AG13).” [APP-195, para. 9.3.2, p.570].

As noted in the Applicant’s response to Dr Field’s Written Representation [REP2-163]:

“The long barrows within the AG12 Winterbourne Stoke Crossroads Barrows and the AG13 Diamond Group are all outside the Scheme order limits and will be preserved in situ during Scheme construction (please see the Detailed Archaeological Mitigation Strategy (DAMS) submitted at Deadline 2 of this Examination REP2-038, Appendix D, Action Area 27.3 for the AG12 Winterbourne Stoke Crossroads Long Barrow). As the AG13 Diamond Group lies outside the order limits, these will not be physically impacted and will remain in situ in private land and under their current agricultural regime. Lake long barrow, which is part of Asset Group AG16 North Kite Enclosure and Lake Barrows, lies further away from the Scheme to the southeast, adjacent to Byway 12.

The Scheme has been designed to reduce the visual intrusion of the retained cutting for the western approach road within the landscape. The proposed Green Bridge No. 4 (the long land bridge) would help to reduce the severance due to the cutting and would maintain physical landscape connectivity in this area, being specifically placed to ensure that the relationships (physical, topographic and visual) are maintained between the two upstanding long barrows in the Winterbourne Stoke Crossroads Barrows (AG12) and the Diamond Group (AG13). Please see 9.3.2 of the Heritage Impact Assessment [APP-195]. The preferred route for the Scheme was selected to minimise effects on archaeology and to avoid known archaeological remains, important sites and monuments [...]” [REP3-013, para. 49.1.7.8].

“...As part of the development of the design of the Scheme, Green Bridge No. 4 was moved eastwards and widened from 50m to approximately 150m in order to provide greater physical and visual connectivity between the

Winterbourne Stoke Crossroads Barrows and the Diamond Group and, in particular, the two upstanding long barrows in each group in this western part of the WHS. The retained cutting in the western approaches allows visual connectivity to be maintained between the Winterbourne Stoke Crossroads Barrows, the Diamond Group and the Normanton Down Barrows that contribute to the OUV of the WHS, as agreed with heritage stakeholders. The design of the retained cutting incorporates an upper grassed slope and chalk grassland mitigation to the north and south. This allows the cutting to blend into the surrounding landscape from key views between monument groups [...]” [REP3-013, para. 49.1.12].

Regarding the Stonehenge Alliance’s assertion that ‘future research might provide answers but major intrusion in the landscape could preclude better understanding’, the Applicant has identified in detail the extensive problems that are currently caused or exacerbated by the existing A303 and has further identified why the Scheme is vital in addressing those problems to the benefit of the region including the WHS itself. The research potential of the WHS is also recognised in the HIA [APP-195, para. 9.3.4-12; 9.3.75]. The application recognises the archaeological potential of the Scheme and this is reflected in the draft Detailed Archaeological Mitigation Strategy (DAMS) [REP6-013] which sets out the structured, iterative detailed archaeological mitigation strategy. The DAMS has been developed in consultation with Wiltshire Council, Historic England and the Heritage Monitoring and Advisory Group, and with inputs from the Scientific Committee. It will be finalised prior to the end of the Examination and is secured by Requirement 5 of Schedule 2 of the draft development consent order [REP6-005]. The draft DAMS is rooted in the Research Framework for the Stonehenge and Avebury and Associated Sites WHS (Leivers and Powell 2016) and a Scheme-specific Archaeological Research Agenda [REP6-013; Section 4].

With regard to the research potential of archaeological remains, see Highways England’s comments on the Stonehenge and Avebury WHS Coordination Unit’s Written Representation [REP2-139] regarding future research potential [REP3-013], paras. 24.2.39 – 40].

With regard to the speculative argument that future technology may discover more information, see Highways England’s comments on the Council for

British Archaeology's Written Representation regarding future research potential [REP3-013, paras. 21.4.4-7].

Future understanding of the WHS

With regard to the future understanding of the WHS, the Scheme will enable beneficial opportunities for transmission of OUV and for increasing the public's awareness, understanding and perception of the OUV of the WHS in a local, regional, national and international context. The Detailed Archaeological Mitigation Strategy (DAMS) submitted at deadline 6 [REP6-013] requires that a comprehensive publication and dissemination programme be developed in parallel with the strategy for Public Archaeology and Community Engagement (Appendix E), to deliver a lasting legacy from the archaeological investigation and recording works undertaken for the Scheme. The publication and dissemination programme will be developed in consultation with the Heritage Monitoring and Advisory Group (HMAG) and the public archaeology strategy will link to the work of Highways England's A303 Benefits and Legacy Forum and Benefits Steering Group, which will look to work with partner organisations to develop the Scheme legacy and benefits as the Scheme develops, tying in to the priorities set out within the 2015 WHS Management Plan [(REP6-013, Section 9.2, Outline Publication and Dissemination Proposals, and Appendix E, Public Archaeology and Community Engagement Strategy)].

The Applicant restates that the design has been specifically chosen to limit the landtake for the construction of the Scheme both within the WHS and outside of it in order to minimise the loss of archaeological remains. In terms of landscape, the Scheme has been sensitively designed in order to integrate the Scheme into the existing landform and to remove the sight and sound of traffic from much of the WHS landscape, a key aspiration of the 2015 WHS Management Plan. Regarding Attribute 6 of the OUV of the WHS, 'The disposition, physical remains and settings of the key Neolithic and Bronze Age funerary, ceremonial and other monuments and sites of the period, which together form a landscape without parallel', the HIA [APP-195] assesses a Slight Beneficial effect.

The Applicant does not accept that the Scheme has been designed with an 'extreme absence of sensitivity to what makes the WHS of OUV to mankind'. The Scheme has been sensitively and carefully designed to limit impacts as

		far as possible, minimise intrusion and integrate the Scheme into the existing landform and to remove the sight and sound of traffic from much of the WHS landscape, a key aspiration of the 2015 WHS Management Plan.
6.4.31	<p>LV.2.1.iv.</p> <p>A. We agree with Paul Garwood's findings and would underline that the Bronze Age barrow groups were often formed in alignment with the topography (on ridge tops) and sometimes behind and in alignment with earlier long barrows. There was an obvious relationship – perhaps in the form of respect for the ancestors– between Neolithic and Bronze Age barrows constructed over a period of some 2000 years; there may also have been significance in the topographical disposition and interrelationships of these barrows, Stonehenge, and other major monuments in the landscape.</p>	The Applicant has previously provided its response to the Second Written Question at deadline 6 [REP6-030; LV.2.1 (iv)].
6.4.32	<p>LV.2.1.v.</p> <p>A. This is a considerable drawback. Lack of images of these fascinating and obviously significant connections has meant that most people commenting on the Scheme would not realise that such connections either exist or are important.</p>	The Applicant has provided its response to the Second Written Question at deadline 6 [REP6-030; LV.2.1 (v)]. The Applicant has provided numerous visualisations within the LVIA Chapter of the ES [APP-088 to APP-146] and the Cultural Heritage Setting Assessment [APP-218]. Further visualisations were provided at deadline 3 [REP3-026 to REP3-036]. Additional visualisations are submitted to the Examining Authority at deadline 7. As a result, Highways England does not agree that people commenting on the Scheme would not be aware of the connections.
6.4.33	<p>LV.2.1.vi.</p> <p>A. The Stonehenge, Avebury and Associated Sites WHS was designated at a time when buffer zones were not mandatory but only required “whenever necessary” (Operational Guidelines 1984, para. 14. https://whc.unesco.org/archive/opguide84.pdf). For some years after designation it was thought that a buffer zone would not be necessary. Subsequently, large- scale Government visitor-centre and road projects at Stonehenge presumably made the lack of a buffer zone at Stonehenge convenient. Over time, with the expansion of military building at Larkhill, the construction of a new visitor centre and vehicle parks at Airman’s Corner and the extensive roofscape of</p>	<p>Regarding a WHS buffer zone, the Applicant points to response by Historic England at the Issue Specific Hearing for Cultural Heritage on the 5th and 6th June [REP4-030; Agenda item 3 (v)]. At the hearing Henry Owen John of Historic England explained that:</p> <p>“any modification to the WHS boundary (or provision of a buffer zone) would be a lengthy and complex process; any modification to the boundary proposed as a result of the work of Wiltshire Council would then need approval by DCMS and then the World Heritage Committee.”</p> <p>At Agenda item 6 (ii) [REP4-030], ‘responding to comments made about assets outside the WHS boundary and a buffer zone, Chris Moore (representing the Applicant) explained that in the HIA the Applicant has taken</p>

	<p>Solstice Park, east of Amesbury, the setting of the Stonehenge part of the WHS has been compromised in large part. It is therefore all the more important that what remains of the setting of the WHS should be protected from further major development.</p>	<p>account of assets outside the WHS that contribute to and convey attributes of OUV, such that, in accordance with ICOMOS Guidance, if a buffer zone was established the Applicant would have assessed the impact on such assets that would fall within the buffer (see also the Applicant's response to Written Question CH.1.58 [REP2-025]).'</p> <p>With respect to the statement that 'what remains of the setting of the WHS should be protected from further major development', Highways England states that it is through the planning system that changes to buildings and land in England is managed. The planning system guides decisions on proposed changes to historic buildings and places, including those which are protected, such as the WHS and its setting. Decisions regarding commercial / residential developments and the army rebasing programme, to the north and east of the WHS, and whether these should be granted planning permission or not are a matter for Wiltshire Council, and in relation to designated heritage assets of the highest significance (such as the WHS), Historic England will provide their advice to the Local Planning Authority. For Nationally Significant Infrastructure Projects, recommendations are made by the Planning Inspectorate following a public examination, and a decision is made by the appropriate Secretary of State.</p> <p>With regards to the WHS, the ICOMOS 2011 guidance to Heritage Impact Assessment similarly also states at paragraph 6-2 that 'Conservation is about managing sustainable change'.</p>
6.4.34	<p>LV.2.1.vii</p> <p>A. We agree with the observation made here concerning the Longbarrow junction works. There would be little point in extending the WHS boundary in this location were the Scheme to go ahead. Similarly, the proposed re-configured junction at Rollestone Crossroads would be prominent and intrusive on the northwestern boundary of the WHS, impinging on views from the WHS itself as well as its setting.</p>	<p>At Agenda item 6 (ii) [REP4-030], 'responding to comments made about assets outside the WHS boundary and a buffer zone, Chris Moore (representing the Applicant) explained that in the HIA the Applicant has taken account of assets outside the WHS that contribute to and convey attributes of OUV, such that, in accordance with ICOMOS Guidance, if a buffer zone was established the Applicant would have assessed the impact on such assets that would fall within the buffer (see also the Applicant's response to Written Question CH.1.58 [REP2-025]).'</p> <p>The same applies with regards to a boundary review in the area of Longbarrow junction or Rollestone Corner [see REP2-025 response to Written Question CH.1.58].</p>

The Applicant disagrees with the Stonehenge Alliance's comment that 'There would be little point in extending the WHS boundary in this location [i.e. Longbarrow junction] were the Scheme to go ahead and has responded already to the Examining Authority's Written Question LV.2.1 (vii) in [REP6-030].

The Applicant does not agree with the Stonehenge Alliance's comment that the 'proposed re-configured junction at Rollestone crossroads would be prominent and intrusive on the northwestern boundary of the WHS, impinging on views from the WHS itself as well as its setting.' The visual assessment [APP-228] has included an assessment from the north-west part of the WHS (visual receptor 35) towards Rollestone junction and concluded that once operational Rollestone junction would be discernible but reflect existing views of the road networks already bordering the WHS and therefore is predicted to result in a neutral effect. Unlike the suggestion in the question the Junction would neither be prominent and intrusive on the northwestern boundary of the WHS nor impinge on views from the WHS itself as well as its setting.

As explained in the HIA [APP-195, Table 9]:

'The new layout is more compact than that previously proposed, minimising land take. Although this change means that the junction would be located just inside the northwest corner of the WHS, surveys did not identify any archaeological remains that contribute to the OUV of the WHS in the Scheme footprint, and the revised Scheme design would minimise highway infrastructure.'

The HIA [APP-195, paragraphs 11.1.32-11.1.33] states regarding the Scheme design at Rollestone Corner:

'The Rollestone Corner junction improvement would require new land take within the WHS. This amended, shorter road layout within the WHS has been developed in place of a more extensive one within the setting of this part of the WHS. The new junction would be unlit and would reduce signage and related highway clutter to a minimum. The use of the new junction as part of the high load and diversionary routes would be occasional and intermittent. Archaeological field evaluations have shown there are no ceremonial or funerary monuments that contribute to the OUV of the WHS within the junction footprint; potential loss of archaeological remains would be mitigated

		<p>through a programme of archaeological fieldwork and recording prior to construction.</p> <p><i>The Rollestone Corner junction improvement would not result in any change to the fabric or setting of the Rollestone Barrows (AG10) and Net Down Barrows (AG06). These Asset Groups, although in whole or in part located outside the current WHS boundary, have been assessed as contributing to the OUV of the WHS as they are included as part of ongoing boundary revision discussions. Although the proposed junction involves construction of a new route within the north-western corner of the WHS, it is not assessed that this would impact upon the Attributes of OUV expressed by these Asset Groups.'</i></p>
6.4.35	<p>[In response to LV.2.3. Visual receptors associated with the route of the existing A303 and Green Bridge 4]</p> <p>LV.2.3.i and ii</p> <p>A. The Alliance's landscape specialist, Andy Norfolk, has given his professional opinion on the lack of analyses by Highways England of the visual effects of the Scheme from the ex-A303 and Green Bridge 4 (Written Representation REP2-137, paras. 23 and 24). We have asked for dynamic images of these views but they have, so far, not been provided by the Applicant. Common sense indicates that these views would show the Scheme to be wholly out of keeping with the character of the WHS and its landscape and strongly disruptive of any potential for enjoyment, identification and contemplation of the attributes of OUV in these locations.</p>	<p>The Applicant has set out why views from the ex-A303 and Green Bridge No.4 have not been included, due to either being future receptors which are not currently present, and therefore not part of the baseline against which to assess the Scheme, or that trying to walk along the existing A303 is not representative. Views from across Green Bridge No.4 will be submitted. The Applicant does not agree that the Scheme would be wholly out of keeping with the character of the WHS and its landscape, nor that it would be strongly disruptive for any potential enjoyment, identification and contemplation of the OUV. The Scheme proposes to increase the recreational opportunities within the WHS via the NMU routes and the reversion of the existing A303 to a restricted byway. The Stonehenge Alliance's submission on tranquillity [REP2-132] concludes "the removal of the road would result in a considerable improvement in tranquillity in the wider area around the henge." The Applicant agrees with this, as well as an improvement in the tranquillity at the Stones and that the potential to recognise, understand and contemplate the attributes of OUV would be improved within the WHS as a result of the Scheme. The Applicant's Heritage Impact Assessment [APP-195, p. 28] concludes a slight beneficial effect on the OUV.</p>
6.4.36	<p>[In response to Ns.2.7. Vibration effects on archaeology]</p> <p>NS.2.7.i-iv</p> <p>A. The Stonehenge Alliance has not been asked to give answers to these questions and they do not appear necessarily to relate</p>	<p>The Applicant's response to Written Question Ns.2.7 is set out in REP6-031. In summary:</p> <p>i) It is agreed that there are no standards for protecting archaeological remains from potential vibration damage. The precise details of the vibration monitoring methodology will be set out in the Noise and Vibration</p>

specifically to vibration caused by a tunnel boring machine. In addition to our comments given under ExQ. CH.2.9, above, vibration specialist Rupert Thornely- Taylor has, however, offered the following comments to each question (by email to K. Fielden 22.7.19):

“i) There are no standards applicable to protecting archaeological remains that I am aware of. A methodology for monitoring would have to be worked out as there are major uncertainties associated with measurement of vibration in soil, mainly due to the effect of transducer attachment.

“ii) The precautionary approach is to base significance thresholds on ambient vibration levels. Sources of ambient vibration are the passage of vehicles on the nearby roads, footfalls, wind turbulence at Stonehenge and seismic activity. Both footfall vibration (which would obviously be greatest at the solstice event) and seismic activity occur infrequently. Earthquakes are felt in Wiltshire (February 2018 attracted attention). Unfortunately converting earthquake magnitudes into vibration units is not straightforward. They are of very low frequency, compared to TBM vibration which extends up into the audible range.

“iii) Please see second sentence under comment i), above.

“iv) If monitoring reveals levels of vibration from the TBM which are likely to have significant effects on archaeological remains, no mitigation is available other than stopping the TBM. Reducing its rotation speed or thrust force have a very small effect.”

Management Plan required by MW-NOI3 of the Outline Environmental Management Plan (OEMP) [REP6-011]. As set out in MW-G7 of the OEMP [REP6-011], this will be prepared in consultation with Wiltshire Council, the Environment Agency, Historic England and Natural England. As such, key stakeholders will feed into the process of determining the final vibration monitoring regime, including in relation to archaeology. The Noise and Vibration Management Plan will include specific details in terms of the choice of transducers, method of coupling, measurement locations, measurement durations, etc. taking into account the guidance in various relevant British Standards (BS 7385: 1993, BS ISO 4866:2010, and BS 5228: 2009+A1: 2014 as referenced in MW-NOI5 of the OEMP [REP6-011]).

ii) As stated above there are no standards for protecting archaeological remains from potential vibration damage. Therefore, heritage assets, including archaeology will be considered on a case by case basis based on the final detailed design, tunnelling methodology and asset sensitivity to determine the need for monitoring and actions to control or mitigate impacts. Amendments made to the OEMP at deadline 6 [REP6-011] ensure this would be done in consultation with members of HMAG (MW-NOI5).

iii) See response to i) above

iv) MW-NOI5 of the OEMP requires the main works contractor, in consultation with members of HMAG, to identify potentially vibration sensitive cultural heritage assets and actions to control or mitigate impacts (including monitoring). This is also required as part of the Ground Movement Monitoring Strategy (MW-G7 and MW-CH8 of the OEMP). See applicant's response to Written Question Ns.2.8, iv. [REP6-031]. Experience from the Crossrail tunnelling project identified that vibration generated by a TBM is sensitive to various parameters, including the distance to the cutting face, geology at the cutting face, geology along the transmission path, TBM type, thrusting pressure, rotational speed, cutter disc arrangement, etc. Therefore, whilst it is agreed that the main focus of the mitigation strategy is in the choice of tunnelling method and TBM there are measures that can be implemented during the works.

6.4.37	<p>[In response to Ns.2.8. Settlement effects on archaeology]</p> <p>Ns.2.8.i–v</p> <p>A. Again, the Stonehenge Alliance has not been asked to answer these questions. In addition to comments by Mr Thornely-Taylor under ExQ CH.2.9, we would, however, like to make the following comments on the itemized questions.</p> <p>i) We know of no agreed methodology for measuring settlement or what standards could be used to safeguard archaeological remains of differing kinds and fragility from damage arising from tunnel boring or the tunnels in operation.</p> <p>ii) Again, without knowing what archaeological remains would be involved, it is difficult to suggest the level of settlement at which significant effects would occur.</p> <p>iii) We know of no current method of monitoring settlement to protect archaeology; nor do we know if the methods suggested by the Applicant would be effective in both monitoring and protecting archaeological remains.</p> <p>As with the impacts of vibration on archaeological remains, the only certain method of preventing damage is to stop the TBM. Given the uncertainty of how best to monitor settlement, we cannot advise on positions of monitoring locations.</p>	<p>The Applicant's response to Written Question Ns.2.8 is set out in REP6-031. In summary:</p> <p>i. It is agreed that there is no standard threshold or assessment for tunnelling induced settlement levels affecting archaeological earthworks, such as burial mounds and buried assets, due to the unique and varying sensitivity of such assets. The impact has therefore been assessed by reference to the geotechnical stability of the earthwork following a more conventional approach comparable with tunnelling through a railway embankment which is extremely sensitive to ground movement. In accordance with the Detailed Archaeological Mitigation Strategy and the Outline Environmental Management Plan (MW-G7 and MW-CH8) [REP6-011], the main works contractor will develop a Ground Movement Monitoring Strategy (GMMS) to be approved by Highways England prior to tunnelling works commencing. The GMMS will identify heritage assets that are at risk of ground surface movement caused by settlement and as part of the strategy the contractor shall develop contingencies and identify measures to ensure the protection of the assets.</p> <p>ii. The Land Instability Risk Assessment Report [APP-278], ES Appendix 10.6, sets out the staged process taken to assessing ground movement. The Applicant has looked at how the ground may move and has also looked at the features in the landscape and has then carried out an assessment of the effect of any movement on those assets to determine whether there could be any adverse effects. The assessment has shown that any changes to heritage assets would be negligible.</p> <p>iii. At Issue Specific Hearing 2 (Cultural Heritage) and recorded in written summaries [REP4-030] (see agenda item 7(iii) under the heading "DAMS paragraph 4.2.6") the Applicant explained that the provision of monitoring during tunnelling is well established over the last decade, and that the monitoring of the ground for excavation movements would help validate the process of tunnelling and manage risk to ensure asset protection.</p> <p>iv. In accordance with MW-G7 and MW-CH8 of the OEMP [REP6-011] the contractor will develop a GMMS during the detailed design to be approved by Highways England prior to tunnelling works commencing. The positioning and installation of the monitoring installations will be part of this strategy which shall be developed in accordance with requirements of the DAMS [REP4-024] (an updated version of which was submitted at deadline 6) which states in</p>
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		<p>para 5.2.8 that the requirement for these will be scoped to minimise the number of installations required. The locations of these installations will be selected to avoid known archaeological remains. Targeted archaeological mitigation at these locations will include ploughzone artefact collection, archaeological excavation and recording and/ or archaeological topographic survey, as relevant.</p> <p>We do not agree that ‘the only certain method of preventing damage is to stop the TBM.’ There are well-established means of dealing with excavation induced ground movement including grouting from the tunnel horizon that can be implemented in conjunction with the GMMS.</p>
6.4.38	<p>[In response to Ns.2.9 Noise]</p> <p>Ns.2.9. Noise</p> <p>A. The experience of walking along the ex-A303 and in the region of the Winterbourne Stoke Barrow Group would obviously not be improved by the distraction close by of a major road cutting and tunnel portals, fast-moving traffic, noise including decelerating on the slip roads and vehicle lights at night.</p>	<p>As illustrated in Figure 9.4 of the Environmental Statement [APP-167], road traffic noise levels along the alignment of the current A303 east of the existing Longbarrow junction, and at the Winterbourne Stoke Crossroads Barrow Group to the north-east of the existing Longbarrow roundabout, will be reduced with the scheme in operation due to the realignment of the A303 further away to the south which will also be in a deep cutting.</p>

7 Jon Morris (REP5-030)

7.1	Comments on REP4-036	
	Matter Raised	Highways England's Response
7.1.1	<p>2.0 Comments on policy</p> <p>2.1 Following the applicant's response to my Deadline 3 representation (Item 1 of 1.1 above; of which the relevant marked-up part is extracted in Appendix A of this document), I would comment on the applicant's response as follows:</p> <p>2.2 The fifth sentence of the applicant's response states:</p> <p>"This position is made clear by paragraphs 4.3 and 4.5 of the National Policy Statement for National Networks (NPSNN) which explains that the business case provides the basis for investment decisions, and that the information underlying the business case will be important for the decision maker's consideration of the adverse impacts and benefits of a proposed development."</p> <p>2.3 The wording of paragraph 4.5 of the NPSNN (see Appendix B for extract from NPSNN) is as follows:</p> <p>"Applications for road and rail projects (with the exception of those for SRFIs, for which the position is covered in paragraph 4.8 below) will normally be supported by a business case prepared in accordance with Treasury Green Book principles. This business case provides the basis for investment decisions on road and rail projects. The business case will normally be developed based on the Department's Transport Business Case guidance and WebTAG guidance. The economic case prepared for a transport business case will assess the economic, environmental and social impacts of a development. The information provided will be proportionate to the development. This information will be important for the Examining</p>	<p>Please see response to item 3.1.1 (in response to Jon Morris' similar points) and 11.1.12 (in response to Stonehenge Alliance on this point) in the Comments on any Further Information at Deadline 4 submitted at deadline 5 [REP5-003] and the response to Written Question Tr.2.3 [REP6-032].</p>

	<p>Authority and the Secretary of State's consideration of the adverse impacts and benefits of a proposed development "</p> <p>2.5 I have highlighted the relevant statement of policy in bold above. The highlighted sentence of clause 4.5 (above) appears to show that the Business Case is a consideration of the Examining Authority.</p> <p>2.6 In the first sentence of the applicant's reply, the applicant subsequently states:</p> <p>"As explained in response to Written Question Se.1.25, the work around the Contingent Valuation Report (CVR) is primarily relevant to the Department for Transport's investment decision in the Scheme, rather than the planning merits of the Scheme."</p> <p>2.7 The above sentence does not discount any requirement for that work to also be used for assessment of its benefit and adverse effects. Following this, the applicant confirms that the CVR is a tool that can be used to compare factors:</p> <p>"The CVR is a tool to compare factors that are not easily balanced; it does this by monetising them."</p> <p>2.8 However, the applicant appears to have then interpolated the perspective described in the first sentence onto Planning Policy (third sentence of their response follows):</p> <p>"The CVR is a tool to compare factors that are not easily balanced; it does this by monetising them. Therefore, whilst the benefits / factors being measured by the CVR are relevant to the planning decision whether to grant consent for the Scheme, in their monetised form they are not."</p> <p>2.9 I disagree with the above interpretation. The purpose of Social Cost-Benefit Analysis, as recommended by The Green Book, is a way of expressing the value of a proposed government policy to society. It seeks to express the full social costs and full social benefits of policies in monetary terms so that the consequences of a diverse range of policies can be compared using a common metric. The term "common metric" is a method of describing impacts and benefits using the same form of measurement. I have extracted</p>	
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<p>below a quote from Fujiwara and Campbell [see Appendix C of this document for the relevant extract] describing that purpose:</p> <p>“Social Cost-Benefit Analysis, as recommended by the Green Book, is a way of expressing the value of a proposed government policy to society. It seeks to express the full social costs and full social benefits of policies in monetary terms so that the consequences of a diverse range of policies can be compared using a common metric.”</p> <p>2.10 Clause 4.3 of the NSPNN (see Appendix B) describes the decision making process and states:</p> <p>“In considering any proposed development, and in particular, when weighing its adverse impacts against its benefits, the Examining Authority and the Secretary of State should take into account:</p> <ul style="list-style-type: none"> • its potential benefits, including the facilitation of economic development, including job creation, housing and environmental improvement, and any long- term or wider benefits; • its potential adverse impacts, including any longer-term and cumulative adverse impacts, as well as any measures to avoid, reduce or compensate for any adverse impacts.” <p>2.11 It would be difficult to see how an Examining Authority could assess the benefits and adverse impacts of a scheme if it can not take account of work comparing what the benefits and adverse impacts are (by using a common metric as described in the Social Cost-Benefit Analysis undertaken by the applicant). Nevertheless, the applicant appears to be arguing in the fourth sentence that impacts and benefits should not be compared using the tools described in the second sentence:</p> <p>“The decision maker is required to balance the various impacts and benefits of the Scheme without converting all those impacts and benefits to the same form of measurement.</p> <p>2.12 In summary, the applicant's response appears to be confused: They appear to accept that the ExA is a “Decision Maker”, but simultaneously appear to be arguing that the ExA should not take into account the decision making instruments prescribed by National</p>	
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	Policy. Irrespective of whether or not the term “Decision Maker” (terminology introduced by the applicant) applies to the ExA, National Policy appears to allow the ExA to use that information to make its determination in accordance with the methods described in National Policy.	
7.2	Comments on Contingent Valuation Report Appendix A – Survey Information [REP4-034 Appendix A]	
	Matter Raised	Highways England’s Response
7.2.1	<p>3.0 Comments on Survey</p> <p>3.1 Following the applicant's release of the applicant's “Valuing Heritage Impacts: Appendices” (Item 2 in 1.1 above), I have attached (Appendix D) a marked up, and bookmarked, extract and would comment on the applicant's document as follows:</p> <p>3.2 Prior to asking the general public to participate in valuing the World Heritage Site, the applicant's survey introduced the following potential descriptions at item A12 (Page LXII, page 64 of the original pdf):</p> <p>“21: Stonehenge is one of the most important heritage sites in the UK 23: Stonehenge should be protected for future generations 24: Other monuments within the World Heritage Site surrounding the Stonehenge stone circle should be equally protected”</p> <p>3.3 It is not clear why the applicant introduced item 24 above: By allowing the potential for more access, the protection of other monuments south of the A303 is likely to reduce marginally.</p> <p>3.4 Following this introduction, in the survey Item referenced “IntroBb” (Page LXV, page 67 of the original pdf), the applicant's survey reinforced a perception of the World Heritage Site by stating to the public:</p>	<p>Please see response to agenda item 3.1.2 in the Comments on any Further Information at Deadline 4 submitted at deadline 5 [REP5-003].</p> <p>The Applicant agrees that much of the land to the south of the A303 is in private ownership and agrees that it is not the intention of the Scheme to provide access to monuments which are situated on private land. The Scheme however allows for the reconnection of the World Heritage Site to the north and south of the existing A303, allowing people to explore the landscape through the use of existing byways and other PRoWs either side of the existing A303. A key objective of the Scheme is to enhance public access and connectivity to and through the WHS.</p> <p>Respondents to the survey were provided with a description of the impact of the existing A303 on the WHS. They were also provided with information on the expected impacts of the scheme. The amount and type of information presented in the survey was subject to review by the project team and independent peer review. The design of the survey instrument included extensive testing of the draft survey instruments with input from the fieldwork provider, Ipsos Mori. The pilot stage concluded that the information presented was relevant and sufficient to allow respondents to meaningfully engage with the survey without biasing their response.</p> <p>Highways England agrees that removal of the A303 from the WHS creates safe environment for people to access the southern areas without the need to cross a road. The current A303 is a significant barrier to accessing the southern part of the WHS.</p>

	<p>“The Stonehenge World Heritage Site encompasses one of the richest concentrations of prehistoric archaeological monuments in the world.”</p> <p>3.5 Before going on to state that:</p> <p>“Traffic on the road prevents visitors from moving freely across the World Heritage Site to the South which contains a number of other rare and important archaeological sites.”</p> <p>3.6 As mentioned in previous submissions, this is misleading: Traffic may prevent free movement, but most of the land is private, so free movement between most of these sites will not be available regardless of whether or not the scheme is completed.</p> <p>3.7 Immediately after the above statements, the applicant's survey showed the public a map (as noted at B1: Page LXVI, page 68 of the original pdf) of the World Heritage Site. This map (See extract page VII in Appendix D) showed the areas that would be accessible according to previous statements. However these areas will, in the main, not be accessible (refer to my submission notes referenced R0012 and 13 for more detail).</p> <p>3.8 On the next page (Page LXVII, page 69 of the original pdf), the applicant's survey then states:</p> <p>“Removal of the A303 would reconnect the World Heritage Site to the north and south of the existing A303 allowing visitors to walk freely between Stonehenge and other archaeological sites in the World Heritage Site.”</p> <p>3.9 As mentioned in my previous submissions, most of the land is private so visitors are unlikely to be allowed to walk freely between Stonehenge and other archaeological sites in the World Heritage Site, regardless of whether or not the scheme is completed.</p>	<p>Furthermore, the current A303 will become a restricted byway allowing safe access. This will augment the existing public access to the WHS south of A303 via Byways 11 and 12 and along a permissive path on National Trust land between these two byways north of the Normanton Down barrow group. The Scheme will provide improved connectivity (and therefore improved safety) between existing permissive paths and PRoWs once the tunnel is in place.</p> <p>These measures will increase access to the southern part of the WHS and support the statements made as part of the Contingent Valuation Survey.</p>
7.2.2	<p>3.10 On the following page (Page LXVIII, page 70 of the original pdf), the applicant's survey then states some notes about the scheme, one of which is:</p>	<p>Please see response to agenda item 3.2.1, 3.2.2 and 3.1.5 in the Comments on any Further Information at Deadline 4 submitted at deadline 5 [REP5-003].</p>

<p>“Reconnect the World Heritage Site to the north and south of the existing A303, allowing people to explore the whole landscape.”</p> <p>3.11 By running through the above sequence, the survey starts by introducing the idea of protection of other monuments (3.2 above: An effect that will not happen with this scheme), it then reinforces the status of those monuments (3.4) before stating that Traffic prevents free access (3.5) and then shows a map of an area (3.7) before telling the public that they will be able to access it (3.8) and then reinforces that opinion by stating that access will be given under the scheme (3.10). However, the area south of the A303 is mostly private land: The applicant has put forward no plans to make access possible.</p> <p>3.12 The public were then asked to value the benefit of the scheme. Following this, the public were then asked to specifically identify which one of these four potential benefits was most important:</p> <ul style="list-style-type: none"> • Reduction of traffic noise/tranquility of Stonehenge and the World Heritage Site (4) • No traffic visible from the stone circle at the Stonehenge World Heritage Site (5) • The ability to explore the whole Stonehenge World Heritage site and explore all its archaeological monuments without the land being divided by the road (6) • The removal of a modern road from a historic landscape (7) <p>3.13 If the public put any preference on item 3) above, and that value was then used to justify the project, there appear to be grounds to dismiss the survey as invalid: If the result were not invalid, it would appear to set a new precedent for valuation based on “Information Bias” (refer to submission R0014).</p> <p>3.14 Although not apparent from the documentation provided, there remains a possibility that the applicant might be able to show that the</p>	<p>The Applicant agrees that much of the land to the south of the A303 is in private ownership and agrees that it is not the intention of the Scheme to provide access to monuments which are situated on private land. The Scheme however allows for the reconnection of the World Heritage Site to the north and south of the existing A303, allowing people to explore the landscape through the use of existing byways and other PRoWs either side of the existing A303. A key objective of the Scheme is to enhance public access and connectivity to and through the WHS.</p> <p>Furthermore, the current A303 will become a restricted byway allowing safe access this will augment the existing public access to the WHS south of A303. These measures will increase access to the southern part of the WHS and support the statements made as part of the Contingent Valuation Survey.</p>
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	<p>item 3) preference valuation proportion was discounted in their final analysis. If so, it is still possible that the CVS conforms to the NPSNN guidance. However, if there was a final report produced, (other than that contained in the original TAR documentation and its appendices), it does not appear to have been made available to the Inquiry.</p>	
7.2.3	<p>3.1.t A final report (as described in 3.13 above) may contain further issues. Due to late stage of the Inquiry, it is very unlikely that Interested Parties to the Inquiry will have sufficient time in which to review these issues with the applicant.</p>	<p>Please see response to agenda item 3.1.4 in the Comments on any Further Information at Deadline 4 [REP5-003].</p>
7.2.4	<p>3.15 As noted in my submissions 80034-R0012 and 80034-R0014, the National Audit Office report does not appear to formally state that the NAO have reviewed the applicant's Contingent Valuation Study. Given the issues noted above, it could be particularly useful to establish whether or not the NAO has verified the entirety of the A303 Contingent Valuation Study, especially given the apparent reliance of the applicant's counsel on the NAO's approval during verbal presentations.</p>	<p>Please see response to agenda item 3.2.4 in the Comments on any Further Information at Deadline 4 [REP5-003].</p>

8 National Farmers Union (REP5-017 and REP6-059)

8.1	Written summary of oral submissions made at the compulsory acquisition hearing held on 9 July 2019	
	Matter Raised	Highways England's Response
8.1.1	<p>4.2: Whether all reasonable Alternatives to Compulsory Acquisition have been explored including modifications to the scheme. HE at the hearing stated that they have considered alternatives and that this includes all the different route options which have been considered in consultation before the preferred route was announced. That their main aim has been to minimise land take and that once the preferred route was chosen it is the route alignment and route design which dictates what land will be required. It has not been looked at on a parcel by parcel basis. Further confirmed by HE that the land highlighted is due to its proximity to the route that is mainly what has determined the land take. It was further highlighted that alternatives have been looked at in greater detail in regard to the land take for land East of Parsonage Green for the tunnel arisings. The NFU at the specific issue hearing on 11th June made a strong case that the alternatives had not been considered in enough detail especially to take the waste arising off site to land fill. The impact of taking 135 acres out of agricultural production and the impact on the farm business has not been considered at all and is not stated in the Appendix.12.1 Tunnel Arisings Management Strategy. The NFU raised this again at the CA hearing. The NFU at the CA hearing confirmed that it was only lately that HE were confirming why they needed some of the land and actually still justification had not been given for some areas of land. An example was highlighted how Mr. Turner from Manor Farm had had to ask on numerous occasions why where some of the balance ponds needed and why did they need to be the size that has been shown. It is still felt that HE could</p>	<p>Please see response to agenda item 4.2 in the Oral Submissions report regarding Compulsory Acquisition [REP5-002] which explains that the process for consideration of alternatives is set out in the Applicant's Statement of Reasons [APP-023, at paragraph 5.5], and is detailed in the Environmental Statement [APP-041, at Chapter 3], in the Case for the Scheme [APP-294] and in the Design and Access Statement ("DAS") [APP-295].</p> <p>The impacts of the Scheme on land owned by the Turner family were also considered at the Compulsory Acquisition hearing held on 9-10 July 2019: please refer to the Applicant's written summary of oral submissions [REP5-002] under agenda item 8.1 on page 2-21.</p> <p>The Applicant explained at the compulsory acquisition hearing how the impacts on farm businesses had been considered, noting that it was not the role of the Environmental Statement (of which the Tunnel Arisings Management Strategy forms part – Appendix 12.1) to assess the monetary or non-monetary impacts of the proposed acquisition of particular land parcels; rather such impacts were aligned to matters required to be dealt with under the compensation code: please refer to the Applicant's written summary of oral submissions [REP5-002] under agenda item 8.1 on page 2-13.</p> <p>The Applicant also explained at the compulsory acquisition hearing that its approach to identifying land proposed to be subject to powers of compulsory acquisition did include consideration of factors such as field boundaries: please refer to the Applicant's written summary of oral submissions [REP5-002] under agenda item 8.1 on page 2-30.</p>

	do more to align these balance ponds with field boundaries so that they cause less interference to the land holding.	
8.1.2	2.2 Simon Mole from Carter Jonas on behalf of two landowners also stated that he would have expected land justification to be on a plot by plot basis and for each area to be analysed to assess why required, is the area required correct and is there any alternative on that land holding. The NFU believes that HE still need to carry out a further assessment of land to be taken on a plot by plot basis to make sure that each plot can be justified. The NFU strongly disagrees with HE stating that they have justified each plot.	Please see response to agenda item 4.2 in the Oral Submissions report regarding Compulsory Acquisition [REP5-002], in particular please refer to the Applicant's submissions summarised on page 2-8, which explain how the proposed land take is considered to be justified on a plot by plot basis.
8.1.3	2.3 Mr. Eaves also raised the issue that he thought HE had not considered taking land by alternatives to compulsory acquisition by acquiring land through lesser rights than compulsory acquisition. The NFU is aware that Mr. Eaves and Mr Read have been asking HE to look at acquiring the rights they need without compulsory acquisition and as yet HE have not entered into negotiations on this.	Please see response to agenda item 4.3 in the Oral Submissions report regarding Compulsory Acquisition [REP5-002], in particular please refer to the Applicant's submissions summarised on pages 2-10 to 2-11, which explain how negotiations have been progressed in relation to alternatives to outright compulsory acquisition.
8.1.4	4.3 Whether the Secretary of State could be satisfied that the land proposed to be acquired is no more than is reasonably necessary for the purposes of the proposed development. HE stated that they believe they have only highlighted the land that is required to be able to deliver the scheme and that once final design has been completed if it is shown that not all land is required then less land will be taken. The other re assurance given was that a step down in the rights needed could be considered. The NFU would like an assurance on this to be given by HE and for this somehow to be secured in the DCO.	<p>Please see response to agenda item 4.3 in the Oral Submissions report regarding Compulsory Acquisition [REP5-002], in particular please refer to the Applicant's submissions summarised on page 2-8, which explain its approach to deploying 'lesser' powers where the same outcome can be achieved without using powers of outright compulsory acquisition, for instance by 'stepping down' from this to the acquisition of rights only.</p> <p>The Applicant considers that this approach is already secured implicitly through the terms in which the principal compulsory acquisition article in the dDCO is drafted: article 19(1), which reflects the statutory conditions in section 122 of the Planning Act 2008, only authorises the compulsory acquisition of land which is required for the authorised development, or to facilitate it, or as is incidental to it. Article 19 would not permit the compulsory acquisition of land for any other purposes, and as such, an interrogative</p>

		<p>approach to the exercise of the compulsory acquisition powers is inbuilt into the process.</p> <p>Furthermore, as was emphasised in the Applicant's oral submissions made at the Compulsory Acquisition hearing, it would not be in the Applicant's interest or in the public interest for the Applicant to acquire more land than was actually required for the Scheme: please refer to the Applicant's submissions made on pages 2-9 to 2-10 of [REP5-002].</p>
8.1.5	<p>4.0 The NFU raised the fact that no meaningful negotiations have taken place with the landowners to acquire the land and that HE are relying and waiting to receive compulsory acquisition rights through the DCO being approved. HE stated that the NFU was simply wrong and that extensive negotiations have taken place, landowners have received quantified offers and agreements have been reached. The NFU can confirm that it agrees that HE have carried out consultation with landowners, as in they have been discussing and agreeing position statements, the latest drawings highlighting land to be taken and why land is needed. But as at 9th July 2019 HE have categorically not carried out extensive meaningful negotiations, quantified any offers or reached voluntary agreements with the following landowners:</p> <ul style="list-style-type: none"> • Stephen Moore – Howard Smith – received an email from the DV on 26th June 2019 but this still provided no valuation figures for the land in question. On the 2nd July a table was received from the DV highlighting valuation figures. • West Amesbury Farms and Mrs P M Sandell – Howard Smith – no meaningful negotiations in regard to offers to reach a voluntary agreement. • M & R Hosier – Simon Mole (Carter Jonas) - no meaningful negotiations in regard to offers to reach a voluntary agreement. Mr Mole actually stated this at the hearing. • Druids Lodge – Ben Myerscough(Carter Jonas) - no meaningful negotiations in regard to offers to reach a voluntary agreement • Turner Family – Fowler Fortescue - no meaningful negotiations in regard to offers to reach a voluntary agreement. 	<p>The Applicant has engaged, and sought to negotiate with, all persons affected by its proposed compulsory acquisition. The status of negotiations is set out in the Land Acquisition and Temporary Possession Negotiations Schedule [REP6-016]. The Applicant will continue to engage with all affected landowners on land acquisition. Negotiations led by the Valuation Office Agency have been initiated and will continue through the examination process, and progress will be recorded in future updates to the Land Acquisition and Temporary Possession Negotiations Schedule.</p> <p>The Applicant notes the NFU's request for an additional compulsory acquisition hearing to be held prior to the close of the examination but is conscious of the fact that the further hearings now scheduled by the Planning Inspectorate for late August 2019 do not include a compulsory acquisition hearing. However, as the NFU's stated purpose for requesting a hearing is to update the Examining Authority on progress made in negotiations, the Applicant considers that such updates may be adequately provided in written submissions, reflecting the nature of the DCO examination as a primarily written process.</p> <p>Valuations for each of Mr Smith's clients affected by compulsory acquisition (Stephen Moore, Robin Parsons, Pamela Sandell and Frank and Louise Whiting) were provided on 02/07/2019.</p> <p>M & R Hosier's agent was provided with draft land values by the valuations office and discussions will continue in aim of reaching agreement.</p> <p>Druids Lodge discussions have been ongoing, and Highways England will be approaching with details of an agreement in the near future.</p>

	<ul style="list-style-type: none"> Morrison and King Ltd and Beacon Hill Land – Archie Read (Countryside Solutions) - no meaningful negotiations in regard to offers to reach a voluntary agreement. <p>4.1 HE have not been negotiating heads of terms or sending out any substantive paperwork to landowners for their consideration to reach a voluntary agreement.</p> <p>4.2 The NFU would like to see a further compulsory acquisition hearing and for HE to be able to show to the Examiners that negotiation with landowners have started and serious offers have been made.</p>	<p>Patrick Durnford (representation for Turner family) asked at a recent meeting (03/07/2019) if the land purchase agreements for his clients could be delayed so they are not in the market with all the other landowners. Highways England accepted this and have delayed discussions on acquisition until appropriate.</p> <p>Morrison and King Ltd and Beacon Hill Land Limited – Confirmation has been provided that agreements can be provided, and Highways England will be providing drafts in the near future.</p> <p>There are draft heads of terms and agreements with other land owners not mentioned above but listed in the most recent version of the Land Acquisition and Temporary Possession Negotiations Schedule [REP6-016 and REP6-017].</p>
8.1.6	<p>5.0 Representation from parties who may be affected by the Compulsory Acquisition. 5.1 In the representation made by Fowler Fortescue on behalf of the Turner Family an issue was raised over the size, shape and location of the balance ponds. Mr Bullock on behalf of HE replied that balance ponds had been located as near to the highway as possible and that they will be gravity fed. He confirmed that the draft DCO shows the temporary position of the balance ponds and size required and that as detail design of the route progresses it will be possible to refine the design of the balance ponds. This will then enable HE to only take land that is necessary for the scheme at the final design stage.</p> <p>5.2 The NFU in response to this requested that there needs to be a guarantee that negotiations will take place with landowners over final design especially in regard to compound sites and balance ponds. The NFU requested that this is stated in the OEMP so that it is binding on HE</p>	<p>The Applicant confirms that the deadline 6 version of the OEMP [REP6-011] has been further updated and will be re-submitted in due course. The updated version includes amendments to Table 2.1 and item MW-COM3 which include provision for the Agricultural Liaison Officer to liaise with landowners, occupiers and agents, as appropriate, regarding balancing pond locations and design. Accordingly, engagement and meetings with landowners will continue during and post examination and updates will be provided as the design progresses.</p> <p>As stated within the written submission of oral submissions made at the Compulsory Acquisition hearing held on 9 and 10 July 2019, under agenda item 8.1 [REP5-002] (at Appendix 1 – Technical Note on the rationale for size and location of construction compounds), “It is necessary to provide for a proportionate degree of flexibility to enable the contractor, once appointed, to determine the specific layout of the compound and to configure it in a way that allows enough space for the requisite works to take place.” As stated in the Applicant’s response to Second Written Question CA.2.49 ii [REP6-026] there are numerous control measures secured via the OEMP [REP6-012], which mitigate potential adverse environmental effects associated with the compounds. In addition, item MW-COM1 in the OEMP also requires the main works contractor to communicate with landowners in relation to matters related to construction works.</p>

8.2	Responses to the ExA's Second Round of Written Questions	
	Matter Raised	Highways England's Response
8.2.1	<p>Ag.2.9: Outline Soils Management plan : NFU would like to see an outline soil management plan being drafted which includes details of the general principles of how soil will be treated and aftercare carried out. The detail included in the OEMP at MW-COM4 and MW-COM 5 is very brief and does not give enough assurance to landowners and occupiers. We would like further detail to be agreed in an outline soil plan which is linked to the OEMP so that it is binding under the DCO.</p> <p>The NFU would like to state how important it is that a pre-construction record of condition and soil survey is undertaken to form a soil report/soil statement. This soil report/statement can then be used to inform what aftercare requirements are needed to bring the soil back into agricultural use and to bring the soil back to its original condition. We would also expect annual monitoring of physical soil characteristics and soil nutrient levels to be carried out. The NFU would expect to see aftercare carried out over a five year term. It is very important that this is set out clearly in the OEMP so that the contractors know exactly what they have got to do before construction starts and what is required for soil aftercare.</p> <p>The NFU would like to see the wording at Appendix B in regard to the pre-construction survey of soils. The detail we have requested to be included in a record of condition has now been included in the OEMP at ref: MW- COM 8 but this will need to be linked to the soil survey and form part of the soil statement.</p> <p>Under Appendix B wording has been highlighted that the NFU would like to see covered in some form for temporary soil compound sites and access and haul roads. The NFU has just agreed the wording</p>	<p>Refer to the Applicant's responses to items 4.1.6 and 4.1.7 within the Comments on any further information requested by the ExA and received to Deadline 4 and 5 regarding the Outline Environmental Management Plan document [REP6-034]. In summary, these confirm that an Outline Soils Management Strategy has been included within the OEMP (Appendix A.3) [REP6-011] and Preconstruction Soil Statements are to be produced (items PW-COM2 and MW-COM4).</p>

	being requested with HE on the A30 Chiverton Cross to Carland Scheme.	
8.2.2	CA.2.38: Allington Track acquisition of this land: The NFU stated in its Written Representation that HE did not need acquire the land at Allington Track to achieve its objectives. This has been made clear in the submission to the Examining Authority from Countryside Solutions on behalf of Beacon Hill Land Ltd to deadline 5. In the submission at 2.6.3 it states that Plots 11-22/ 11 -23 and 11 -25 relate to the proposed stopping up of Allington Track and the retention of the existing service media. It states that the landowner is willing to enter into appropriate agreements (easements, licence to occupy undertake works etc) to achieve the Applicants/HE objectives. Countryside Solutions stated that compulsory powers are not required as this can be achieved by way of agreement.	Please see response to agenda item 8.1 in the Written Summaries of Oral Submissions regarding Compulsory Acquisition at deadline 5 [REP5-002] at pages 2-28 to 2-29 and 2-32. Please also refer to the Applicant's responses to Second Written Questions CA.2.36 and 2.39 [REP6-026].
8.2.3	DCO.2.10: Article 3 – Disapplication of legislative provisions: HE in their response and post hearing note at Rep 4 – 029 in regard to Temporary Possession have stated that if they have to give a longer notice period or state duration that they then may need to take a precautionary approach and temporarily possess more land at an earlier stage than it may necessarily require at that point in time. Further may specify conservative durations of temporary possession. The areas of land to be used and taken on a permanent basis are very similar to land holdings which are being affected by HS2. The NFU believes strongly that HE should be able to give a longer notice period than 14 days to landowners before taking any land on a temporary basis. Further work that has been on going on HS2 it is very apparent that a 3 month notice is required. If the DCO only states 14 days then HE will only serve a 14 day notice. HE have stated that they will be in discussions with landowners about temporary land take in advance of the 14 day notice and if this is the case then it should be possible to serve a longer notice period. Even with a longer notice period it should be stated that HE have to take a	<p>The Applicant maintains its view that the disapplication of the temporary possession provisions of the Neighbourhood Planning Act 2017 is justified (see DCO.1.18, DCO.1.19 [REP2-030] and agenda item 3.1(i) of [REP4-029]).</p> <p>The Applicant does not consider its Scheme to be comparable to HS2, the latter is of a size to potentially have a regional sector wide effect.</p> <p>The Applicant notes that the A30 Chiverton to Carland Cross draft DCO is the sole exception to the otherwise established approach of giving a minimum of 14 days' notice of temporary possession which is reflective of the "tried and tested" temporary possession provisions under the Planning Act 2008. As noted in the submissions referred to above, a longer period is likely to have the unintended consequence of leading to a more cautious approach to be adopted to the exercise of the power which could lead to land being possessed earlier than otherwise might have been the case. The Applicant considers the 14 day notice period proposed is reasonable in the context of this Scheme and is necessary to ensure its timely delivery.</p>

	proportionate approach and cannot increase the burden on landowners. Further just because to date DCOs have been granted with a 14 day notice period does not mean that it is the correct notice period going forward. HE on the A30 Chiverton to Carland Cross have agreed to increase the notice period length to 28 days.	
8.2.4	<p>DCO.2.21: Article 13 – Discharge of water: HE has now confirmed that under the Water Industry Act 1991 a drain will include an agricultural field drain. It is understood that a connection to a drain would only be authorised within the Order limits, that the connection is subject to the consent of the owner (which must not unreasonably be withheld) and that the owner may impose reasonable conditions on that consent. The NFU queried this as some field drains will not be large enough to take the discharge of water.</p> <p>The NFU would like to know how a landowner will be contacted in regard to a connection before any water is discharged. This process needs to be clarified and would suggest that perhaps this is defined and set out as a further role for the ALO to undertake. The NFU would like to see this clarified in the OEMP.</p>	<p>Changes were made to the OEMP at deadline 6 [REP6-011] to provide for the ALO to discuss land drainage schemes with owners/occupiers in advance of the finalisation of their consideration, which would include where discharge may be required.</p> <p>Further changes are being considered for the next iteration of the OEMP.</p>
8.2.5	<p>DCO.2.24: Article 15 – Authority to survey and investigate the land: The NFU thanks HE for including the wording as drafted in the draft DCO at 15(3) The notice required under paragraph (2) must indicate the nature of the survey or investigation that the undertaker intends to carry out. The NFU would as requested would like the notice to state</p> <ul style="list-style-type: none"> • Who will be taking entry • The date of entry and for how long • The type of equipment if any will be used. 	<p>Please see the Applicant's response to this suggested drafting at item 39 of the Applicant's Comments on any further information requested by the ExA and received to deadline 4 and 5 submitted at deadline 6 [REP6-035].</p> <p>It is also noted that the OEMP includes a number of liaison obligations imposed on Highways England, including the appointment of an Agricultural Liaison Officer (table 2.1). It is during this liaison that relevant information can be shared with landowners.</p> <p>The Applicant does not agree that an amendment is required to the dDCO and considers that an amendment to the OEMP may be appropriate to capture these concerns. If agreed, the proposed amendment shall be made to the next iteration of the OEMP.</p>

8.2.6	<p>2.0 DCO.2.53 Requirement 4 – Outline Environmental Management Plan: Field Drainage: As stated above at Ag.2.8. the NFU is not satisfied with the wording that has been included in the OEMP at MW –COM 7 to cover field drainage. The NFU would like to see the wording that was submitted in the submission following the Draft DCO hearing on the 4th June 2019. The wording required is as set out at Appendix A.</p> <p>Soil Reinstatement and aftercare: The NFU does still have outstanding concerns in regard to soil reinstatement and aftercare. No further wording has been included to cover soil reinstatement or aftercare by HE in the OEMP. The wording as set out at MW- COM4 does not go far enough. As stated and requested before the NFU would like to see an outline soil plan set out as an appendix to the OEMP. It is really important that a soil survey is undertaken and that this is linked to the record of condition as now set out at MW- COM8. This information then forms a soil statement/ report and can be used to progress soil restoration and aftercare. Specific wording that needs to be included is as follows: <i>The schedule of aftercare maintenance is to include soil testing, appropriate to the target specification for a period of up to five years following completion of the relevant construction works.</i></p> <p>The NFU would like to highlight that an agreement has been reached over wording covering soil reinstatement and after care with HE on the A30 Chiverton to Carland Cross DCO application.</p>	<p>Field Drainage:</p> <p>The Applicant does not agree that the entire Appendix B should be included as elements are not relevant to this Scheme. The Applicant is considering its position on this point and whether an amendment can be made to MW-COM7 which provides further assurance to the NFU regarding land drainage. Should this be agreed, the amendment shall be made to the next iteration of the OEMP.</p> <p>Soil reinstatement and aftercare:</p> <p>Refer to the Applicants responses to items 4.1.6 and 4.1.7 within the Comments on any further information requested by the ExA and received to Deadline 4 and 5 regarding the Outline Environmental Management Plan document [REP6-034]. In summary, these confirm that an Outline Soils Management Strategy has been included within the OEMP (Appendix A.3) [REP6-011] and Preconstruction Soil Statements are to be produced (items PW-COM2 and MW-COM4). The Preconstruction Soil Statements will incorporate the information gather from the Record of Condition Surveys.</p> <p>The Applicant does not agree that the specified wording needs to be included within the OEMP. Land will be restored to the target specification, as recorded in the Preconstruction Soil Statement and set out within the Soils Management Strategy and handed back to the landowner / occupier. The OEMP already contains adequate provision for the monitoring of restored agricultural land (refer to item MW-COM5 of the OEMP [REP6-011]):</p> <p>The main works contractor's ALO shall undertake further inspections of restored agricultural land with the landowner/tenant and Highways England's soils experts (and valuer, if required) to assess the progress of the restoration. These will be carried out with timing appropriate to any perceived issues or concerns. Concerns will be assessed by all parties and appropriate remedial actions or compensation agreed within the parameters of the compensation code and/or any previous agreements made at the time of acceptance of the initial restoration works and handover to the landowner/tenant.</p>
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9 Stephen Moore (REP5-029 and REP6-075 and REP6-076)

9.1	Table Title	
	Matter Raised	Highways England's Response
9.1.1	<p>On behalf of my client I would like to respond to the point made by Highways England during this hearing in connection with returning land to my client following deposition of the tunnel arisings.</p> <p>The summary given by Highways England at the hearing was that it was not possible to return the land following deposition of the tunnel arisings to my client which is why compulsory acquisition is required. However this is in direct contrast to the draft position statement dated 20th June 2019 following a meeting on 6th June. The statement under Proposed Chalk Grassland and Highways England response is that</p> <p>" its ability to reinstate the land (which is not required for the permanent construction of the Scheme) to its current arable use following the deposition of excavated material is not yet confirmed. As such, powers of compulsory acquisition are proposed on a contingent basis, to provide for a situation in which the private landowner required the Applicant to purchase the land; however should the private landowner elect to retain the land in its changed condition following deposition of the excavated material c the Applicants powers of compulsory acquisition would not be implemented in respect of that land.</p> <p>Therefore it appears from the statement given at the Compulsory Acquisition hearing that bet ween the 20t h June when the draft position statement was produced and 9th July Highways England have received advice that the land cannot be restored to either arable use or as proposed chalk grassland and it will not be</p>	<p>The Applicant's written summary of oral submissions made at the Compulsory Acquisition Hearings on the 9 and 10 July 2019 [REP5-002], under agenda item 8.1, on page 2-31 sets out that in response to representations made on behalf of Mr Moore, Mr Turney (for the Applicant) provided the following explanation:</p> <p>"The impacts on this site have been reviewed through previous hearings and written questions. Highways England's position remains that this site cannot be restored to its former agricultural use following the deposition of excavated materials on the site, it would not be a viable prospect and would require an amount of topsoil that would vastly exceed the amount available to the Scheme. That is why it is proposed to be restored to calcareous grassland with the benefits previously explained.</p> <p>The Applicant's response to Second Written Question CA 2.60 [REP6-026], paragraphs 6-8, subsequently provided further clarification:</p> <ul style="list-style-type: none"> • If restored to agriculture, the 41.1ha (12.9ha plus 28.2ha) would require 328,800m³ of soil to be replaced to enable the land to be returned to BMV quality and allow arable cropping. This is a greater volume of topsoil than would be stripped from within the scheme, irrespective of the need to reuse topsoil within the scheme for landscape mitigation areas, batters and verges. • Furthermore, there are no known precedents for restoring BMV agricultural land over chalk excavated from a tunnel boring process, and the risks of being unable to restore to BMV quality, to enable arable cultivations to recommence after construction, are high.

	<p>returned in either condition to my client and will be compulsorily acquired.</p> <p>Needless to say none of the above has been communicated to my client or myself as agent and therefore Highways England should be further examined on this point as Compulsorily acquisition of this land without contemplating returning this to my client is a fundamental change.</p>	<ul style="list-style-type: none"> There are precedents for restoring chalk grassland over chalk excavated from a tunnel boring process, as this requires a much shallower rooting depth than arable cropping, and this land could be returned to Mr Moore as restored calcareous grassland. <p>The text as outlined in the position statement is consistent with the above approach in that it is anticipated that the land identified for the deposition of tunnel arisings cannot be restored to its former agricultural use, but that it can be restored to chalk grassland.</p> <p>Compulsory acquisition powers have been sought over the land on a contingent basis, to provide for a situation in which the private landowner would not wish to accept the land returned in its changed condition. This position has not changed and has been communicated to the landowner and to his agent, Mr Smith, previously.</p>
9.2	Responses to the ExA's Second Round of Written Questions	
	Matter Raised	Highways England's Response
9.2.1	<p>[In response to CA.2.59]</p> <p>The only discussion held was on 7th March 2019 which is recorded by minutes produced by Highways England. There have been no further discussions held since and at the Compulsory Acquisition Hearing if my understanding of the evidence put forward by Highways England is correct, it was stated returning this land to any agricultural condition including chalk grassland was not possible which is a fundamental change to the evidence previously put forward by Highways England.</p> <p>On behalf of my client I have now sought to establish if Highways England believe they will be able to return the land not required for the construction of the new A303 to my client as chalk grassland post construction.</p>	<p>A discussion about the deposition of tunnel arisings was held on 7 March 2019, and further discussions relating to the development of the position statement and ongoing negotiations have continued since this time. The Applicant's position on the restoration of land proposed to be used for the deposition of tunnel arisings is set out above.</p>

	I would suggest that Highways England should be examined further on this specific point to establish what exactly their intentions are for this area of land belonging to my client.	
9.2.2	<p>[In response to Ag .2.5]</p> <ol style="list-style-type: none"> 1. The loss of 137 acres of owned freehold land from a total owned area of 650 results in our asset base reduced by 21%. This is the only asset my client has available to him to secure any lending against and if the Compulsory Acquisition proceeds this will result in less finance being available to my client as the remaining land will have a lower overall value and the ability to service any loan is generated from the reduced area being farmed. 2. The loss of 17% of land farmed in total including land farmed on contract and that rented under a Farm Business Tenancy will increase operating costs of production as the costs will be spread on a smaller area reducing profits or increasing losses. 3. The farming operation is geared up with the correct size and level of equipment to farm the area as efficiently as possible but a reduction of 17 % will render some equipment surplus to requirements which will need to be sold potentially at a substantial loss for which there has been no account of taken by the applicant in their narrative. 	<p>The Applicant responded to these matters in its answer to Second Written Question Ag.2.4 [REP6-019], as follows:</p> <p>The land that is required would be compulsorily acquired by the Applicant at market value, if compensation was not agreed. Detailed negotiations have yet to be concluded but if this money was to be reinvested in replacement agricultural land, there would be minimal long-term financial implications for the business. Production of broadly the same area of agricultural land would continue and the fixed costs of production that exist today (for which no details have been made available) would be spread across the same area of land.</p> <p>If suitable replacement agricultural land was not available, the money could be invested in other business (or investment) opportunities and would be likely to yield a similar financial return. Fixed costs of production would need to be scaled back slightly and this would take time to achieve.</p> <p>The Applicant understands that the practical implications of the acquisition of all of the land required for the Scheme (including that required for the deposition of tunnel arisings) to the farm business would be as follows:</p> <ul style="list-style-type: none"> • the farm would lose permanently a further 41.1ha (over and above the 15.0ha that is required for the construction of the scheme) but would save the costs associated with travelling 9.2kms or 15.6kms every time a field operation or visit to the field was required, which is geographically remote from the rest of the agricultural land currently operated by the business. This latter saving might be diminished by costs associated with travel to any replacement land that might be purchased; • the farm grain store would become slightly over-capacity (with a reduction in grain yield of approximately 400 tonnes (41.1ha @ 10t/ha). This represents an approximate 11 percent reduction in output;

		the farm machinery would be marginally over capacity – but it is extremely unlikely that machinery would be changed due to the loss of 41.1ha from a holding managing in excess of 500ha (owned and contract farmed).
9.2.3	<p>1. The business will have surplus employees as the work load can be undertaken by a reduced number of full time employees as they are skilled arable operators so my client will be faced with employment decisions if the scheme is approved as proposed. Mitigation could be achieved by ensuring that the land potentially required for the scheme is only taken after harvest in a specified year to enable continuity of employment. Additional mitigation could be achieved if the land is returned to my client in a productive capacity consistent with chalk grassland which may require a livestock enterprise being established which could require a member of staff or some other activity requiring staff involvement. The applicant does not appear to have factored in the human cost in terms of the effects on long term employment particularly in Winterbourne Stoke in its application.</p>	<p>The Applicant responded to these matters in its response to Second Written Question Ag.2.4 [REP6-019], as follows:</p> <p>“The land that is required would be compulsorily acquired by the Applicant at market value, if compensation was not agreed. Detailed negotiations have yet to be concluded but if this money was to be reinvested in replacement agricultural land, there would be minimal long-term financial implications for the business. Production of broadly the same area of agricultural land would continue and the fixed costs of production that exist today (for which no details have been made available) would be spread across the same area of land.”</p> <p>Therefore, if land acquisition through Compulsory Acquisition powers is needed, as the compensation payments could be reinvested in replacement agricultural land, there would not have to be any impact upon staffing levels.</p>
9.2.4	<p>2. The reduction in area being farmed will produce a reduction in Gross Farm Income of about £85,000 per annum. Due to the inherent fertility of this block of land the resultant profitability is higher than elsewhere on the land farmed as the inputs of P & K are very much lower. The examiners are reminded that my client grows arable crops for seed purposes on this land which generate higher returns per acre than any recognised Farm Management Pocketbook such as John Nix will show. This is a specialised method of farming requiring exacting attention to detail and losing this land will therefore have a severe impact on the overall business.</p>	<p>The Applicant responded to matters relating to financial loss generally in its answer to Second Written Question CA,2.8 [REP6-026], as follows:</p> <p>“Impacts on the financial aspects of a business are dealt with through the compensation code and whilst matters of compensation are not a matter for consideration by the Examining Authority, they are relevant to, and form part of, the assessment of the private loss that would be suffered by those who would be affected by any powers of compulsory acquisition granted in furtherance of the Scheme. As such, Highways England is of the view that there is adequate assessment of the effects of private loss, with such assessment feeding into the balancing exercise between public benefits and private losses. Highways England has given a commitment that persons affected by the Scheme will be properly and fairly compensated for any losses (including financial losses) suffered. Compensation will be paid on the basis of equivalent reinstatement, and will therefore, necessarily, involve and</p>

		<p>be informed by, a sufficient and proportionate assessment and proper understanding of the loss suffered.”</p> <p>Therefore, if restoration to BMV arable land is not possible, and the land is restored to calcareous grassland instead, this changed state would be factored into any valuation of the land and reflected in any assessment of compensation payable under the compensation code.</p>
9.2.5	<p>3. Mitigation can be achieved by only permanently acquiring the minimum amount of land for building the new road which is the purpose of the scheme leaving the remaining land available to be farmed which would allow the business to continue to operate as it does now subject to some minor changes. Mitigation can also be achieved by taking the tunnel arisings apart from those needed for construction of the scheme to off scheme sites thereby not destroying the landscape developed over a millennium in this area.</p> <p>Finally limited mitigation can be provided by ensuring that if the land is retuned as productive chalk grassland that there is an acceptable up front negotiated financial package agreed and not relegated to being confirmed at a later date.</p>	<p>The Environmental Statement, in Appendix 12.1 “Tunnel Arisings Management Strategy” (TAMS) [APP-285] describes the options available for management of tunnel arisings and explains (as summarised in paragraphs 4.4.9 to 4.4.12) why deposition on land within the Order limits to the East of Parsonage Down is considered to be the preferred option. That is as follows:</p> <p>There is a requirement to deposit tunnel arisings in part of the area to the east of Parsonage Down for essential landscape mitigation, and therefore there would be impacts on landscape, land use, cultural heritage and air and noise in this area. Any additional impacts from placement of the remaining amount of tunnel arisings in this area would be incremental, whereas if tunnel arisings were also placed to the south of Parsonage Down this would introduce impacts into a location that would be otherwise unaffected.</p> <p>From an operational perspective, it is simpler and more efficient to deposit tunnel arisings in a single large area to the east of Parsonage Down rather than having to split the deposition between the two locations: this reduces the need for additional haul roads and increases flexibility and space for drying of the arisings.</p> <p>As stated above, the Applicant’s response to Second Written Question CA.2.60 [REP6-026], at paragraph 8 explained:</p> <p>There are precedents for restoring chalk grassland over chalk excavated from a tunnel boring process, as this requires a much shallower rooting depth than arable cropping, and this land could be returned to Mr Moore as restored calcareous grassland.</p> <p>The points made in relation to the timing of any payment of compensation are noted by the Applicant.</p>

10 Royal Society for the Protection of Birds (REP5-020 and REP6-070)

10.1	Comments on Applicant's written summaries of oral submissions made at ISHs	
	Matter Raised	Highways England's Response
10.1.1	<p>Re: Deadline 4 Submission - 8.30.7 Written Summaries of oral submission at Issue Specific Hearings - Biodiversity and Ecology</p> <p>For clarification and understanding:</p> <p>We note that my comments relating to agenda item 3.3 are in part surmised as follows: Mr Sheldrake noted discussions on mitigation were ongoing and assured the Examining Authority that a solution was certain. My statement during the hearing was 'certainly there is a solution out there.....[we] just need to reach agreement', which has been misinterpreted as 'a solution was certain' which could be wrongly interpreted to mean that agreement is assured [for a solution]. As agreement for a solution has yet to be reached, we request that the summary is amended in this respect.</p>	<p>The response has been noted. Highways England accepts the clarification and understands that Highways England's commitment to the provision of two additional stone curlew plots has been agreed with the RSPB. Subsequent to the Issue Specific Hearing 7 - Biodiversity and Ecology, Highways England has already started the process of implementation of the solution. This process is described in the HRSA Clarification Note: stone curlew plot sift [REP6-039] submitted at deadline 6.</p>
10.2	Responses to the ExA's Second Round of Written Questions	
	Matter Raised	Highways England's Response
10.2.1	<p>[In response to questions EC.2.1 & EC.2.3]</p> <p>The risk of increased disturbance in the landscape leading to cessation of utilization of the nesting plots at the Normanton Down Reserve has been identified and accepted by Highways England (ES Appx. 8.25 HRA Statement to inform Appropriate Assessment para 3.3.3). We welcome Highways England's commitment to provide two additional nesting plots for inclusion in the DCO to provide mitigation such that an adverse effect is avoided beyond reasonable scientific</p>	<p>Highways England has already started the process of implementation of the solution. This process is described in the HRSA Clarification Note: stone curlew plot sift [REP6-039] submitted at deadline 6. Highways England is currently discussing with RSPB and Natural England the appropriate mechanism for securing its commitment to provide the additional two plots.</p>

	doubt for the potential impact at Normanton Down. To meet this standard, the RSPB would expect the provision of the two plots to be secured and described as such in the DCO i.e. the necessary ecological, legal and financial requirements to deliver and maintain the plots is secured via the DCO and accompanying technical documents before the Examination closes.	
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11 Berwick Down Ltd & Biddesden House Farm Partnership (REP5-010)

11.1	Written summary of oral submission made at the compulsory acquisition hearing held on 9 June 2019	
	Matter Raised	Highways England's Response
11.1.1	<p>Groundwater/Private Water Supplies:</p> <p>Concern has previously been raised regarding the potential for the aquifer to be contaminated and for there to be a significant impact on supply levels both during and after the construction phase. Indeed, I attended the Issue Specific Hearing 4 on 11th June and I look forward to seeing the conclusions that are reached as a result of that hearing.</p> <p>However, for the record, I wish to reiterate my clients concern that any impact on the private water supplies would have far reaching consequences on both the agricultural businesses on the Estate as well as the private water supplies to numerous residential dwellings in the area.</p> <p>This item is still under discussion via our Position Statement and therefore assurances are still required that should supplies be affected either during or following completion of the construction works, then the nominated undertaker will provide sufficient alternative supplies in an expedient manner.</p>	<p>Please see response to Agenda item 8.1 in the Oral Submissions report regarding Compulsory Acquisition [REP5-002]. Please also refer to items MW-COM3 and MW-COM6 of the OEMP, and the responsibilities of the ALO within Table 2.1 of that document, which set out obligations in relation to the private water supplies of landowners [REP6-011].</p>
11.1.2	<p>Public Rights of Way:</p> <p>We have previously raised concern regarding the extent of the improvements to the public rights of way and the creation of new ways, which will result in the intensification of illegal or improper public access on my client's land.</p> <p>Further to this, we have questioned the justification of the position of and potential acquisition of rights for the new restricted byway</p>	<p>Please see response to agenda item 8.1 in the Oral Submissions report regarding Compulsory Acquisition [REP5-002].</p>

	<p>running north/south from Longbarrow roundabout to connect to BSJA11 (A360 – A303). In its current form the new PRow will result in the formation of a small triangular field west of the new byway which, due to its shape, will be impractical to farm commercially. We have therefore requested that consideration be given to diverting the new way so that it runs south of the new A303 along the route of the proposed cycleway to the newly formed junction and then in a south easterly direction to run parallel with the realigned A360.</p> <p>This has been the subject of discussion during our Position Statement meetings with HE but as yet agreement has not been reached on a suitable resolution.</p>	
11.1.3	<p>Traffic Management:</p> <p>Concern is raised that insufficient consideration has been given to traffic management during the construction phase, particularly in relation to the potential use of the minor roads and the network of public rights of way in the area as convenient ‘rat runs’ to avoid the inevitable delays around the construction site.</p> <p>This concern has been discussed during Position Statement meetings and we are advised that traffic flows are unlikely to change to any significant degree (Ref: Transport Assessment APP-297 sec 9.5). Indeed, Para 9.5.3 states that;</p> <p>‘During construction there is forecast to be a decrease in flows on the A303 mainline near the scheme’</p> <p>However para 9.5.4 goes on to state;</p> <p>‘To the north of the A303 there will be an increase in flow on the B390 through Shrewton as traffic re-routes from the A36/A303 as a result of increased journey times on the A303. To the south of the A303 there is forecast to be some rerouting for areas to the north west of Salisbury to access the A303 west via the A36 rather than the A360, again due to the increase in journey time on the A303.’</p> <p>Clearly this latter point provides evidence to support our concern, and as no formal agreement has been reached or sufficient</p>	<p>Please see response to agenda item 8.1 in the Oral Submissions report regarding Compulsory Acquisition [REP5-002]. It is also noted that gating is to be put in place, please see design principle P-PRow4 within table 4.1 of the OEMP [REP6-011].</p>

	reassurances provided that traffic will be prevented from using the Public Rights of Ways through the Estate, we remain concerned that this could have a significant impact on the business being run on the Estate.	
11.1.4	<p>Meaningful Negotiations:</p> <p>Finally and for the record, I wish to confirm that whilst discussions with the acquiring authority and their agents have been reasonably productive, these have purely centred around the points we have raised within our consultation responses and subsequent discussions. We have not, as yet, entered into any formal discussions or negotiations regarding the acquisition of my client's land or rights over my client's land. No attempt has been made, at this stage, for the acquiring authority to agree terms for the acquisition of my client's land either by agreement or via Compulsory Purchase Powers subject to DCO approval.</p>	<p>The Applicant has engaged, and sought to negotiate with, all persons affected by its proposed compulsory acquisition. The status of negotiations is set out in the Land Acquisition and Temporary Possession Negotiations Schedule [REP6-016], which includes information relevant to Biddesden House Farm Partnership and Berwick Down Limited (please refer to entries relating to the Guinness family on pages 13-15). The Applicant will continue to engage with all affected landowners on land acquisition. Negotiations led by the Valuation Office Agency have been initiated and will continue through the Examination process and subsequently, and progress during the remainder of the Examination process will be recorded in future updates to the Land Acquisition and Temporary Possession Negotiations Schedule.</p>

12 English Heritage Trust (REP5-012 and REP6-045)

12.1	Written summary of oral submissions made at the compulsory acquisition hearings held between 9 and 10 July 2019	
	Matter Raised	Highways England's Response
12.1.1	However, EHT object to part of the Stonehenge Visitor Centre land (Plot 14/07) being compulsorily acquired for a public right of way (PROW) running adjacent to the east side of the A360 because there is no compelling case in the public interest for the land to be compulsorily acquired. The objection is limited to that specific, non-core element.	<p>See Highways England's response to Agenda item 8.1 in the Written summaries of oral submissions made at the Compulsory Acquisition Hearing 1 held on 9 and 10 July 2019 [REP5-002 on pages 2-33 to 2-34] which explains that the land is needed for the purpose of creating a public right of way connection for non-motorised users, thereby providing a link along the obvious 'desire line' between the public right of way network at and around Longbarrow junction to the Stonehenge Visitor Centre.</p> <p>Further information is also provided in Highways England's Response to First Written Questions regarding Traffic and Transport, specifically Tr.1.32 [REP2-036].</p>
12.1.2	If the land were to be excluded from compulsory acquisition, it is for Highways England (HE) or the Secretary of State to decide whether or not to provide an alternative route and any alternative alignment, as it is not within EHT's gift to make that decision.	<p>See Highways England's response to Agenda item 8.1 in the Written summaries of oral submissions made at the Compulsory Acquisition Hearing 1 held on 9 and 10 July 2019 [REP5-002 on page 2-34] which explains that there is no alternative that might avoid the need for the compulsory acquisition, whilst still achieving the objective of creating a public right of way connection for non-motorised users.</p> <p>Further information is also provided in Highways England's Response to Written Questions regarding Traffic and Transport, specifically Tr.1.32 [REP2-036].</p>
12.1.3	EHT is of the view that if there are option(s) for the A360 PROW that improve safety more than others and do not create new safety risks whereas others do, that must clearly be a material consideration of significant weight as to the best of the identified	See Highways England's response to Agenda item 8.1 in the Written summaries of oral submissions made at the Compulsory Acquisition Hearing 1 held on 9 and 10 July 2019 [REP5-002] which explains that Highways

	alternatives.	<p>England are looking at alternatives with English Heritage and will be able to demonstrate solutions to their safety concerns.</p> <p>Further information is also provided in Highways England's Response to Written Questions regarding Traffic and Transport, specifically Tr.1.32 [REP2-036] and in the Applicant's Additional Submission, submitted to the Examining Authority on 5 August 2019, which comprises an application for non-material changes to the Scheme – see reference NMC-06 in the Applicant's Proposed Changes Application [AS-067].</p>
12.1.4	<p>EHT agrees with Highways England's general approach to the assessment of alternatives and considers the compulsory acquisition of part of its Visitor Centre site is one of the "exceptions" to the broad approach requiring further assessment of alternatives.</p> <p>The core scheme is the A303 tunnel for the road as that is the development that requires development consent (see S115 and Part 3, Planning Act 2008). The A360 PROW is a non-core element that is associated development that does not in itself require development consent.</p>	<p>See Highways England's Response to Written Questions regarding Traffic and Transport, specifically Tr.1.32 [REP2-036].</p> <p>In addition, Highways England provided a response to EHT on this matter in [REP3-013], paragraph 28.5.6 which explained:</p> <p>"The compulsory acquisition power is required to ensure that the new restricted byways can be delivered. The Applicant would prefer to achieve its objectives through a voluntary arrangement, which English Heritage have alluded to and discussions on this matter are ongoing."</p>
12.1.5	<p>On the evidence, the Secretary of State cannot rationally be satisfied of a compelling case for the part of the Visitor Centre site in question to be compulsorily acquired.</p> <p>The proposed A360 PROW route causes significant adverse impacts in terms of:</p> <p>Safety; and</p> <p>EHT's charitable operation of the Visitor Centre site.</p> <p>The proposed A360 PROW is classified as an "on road" route.</p>	<p>See Highways England's Response to Written Questions regarding Traffic and Transport, specifically Tr.1.32 [REP2-036].</p> <p>In addition, Highways England responded to these matters in its response to Written Representations [REP3-013] paragraphs 28.5.7 and 28.5.8. These stated:</p> <p>With respect to English Heritage Trust's (EHT's) specific objections:</p> <ul style="list-style-type: none"> • Potential negative impact on English Heritage visitor operation – This point is understood to mean impact on access to the car and coach parks, and on the visitor experience. As vehicles will have right of way at any NMU crossing point, these crossings are unlikely to have a significant impact on vehicle flows. Providing for more sustainable travel choices may improve the visitor experience;

		<ul style="list-style-type: none"> • Potential conflict between non-motorised byway users and motorised visitors – While Highways England recognises this is perceived as a high risk for EHT, the interface between pedestrians, cyclists and motor vehicles at junctions is frequently managed elsewhere by highway authorities and site operators such as other visitor attractions, supermarkets, shopping centres, etc. without an unacceptable level of incidents; • Potential negative knock-on impacts for A360/B3086 road users - As vehicles will have right of way over NMUs at any crossing point, these crossings are unlikely to have a significant impact on vehicle flows, which might cause tail-backs onto A360 or B3086; • Potential safety risks – As above, the interface between pedestrians, cyclists and motor vehicles at junctions is frequently managed elsewhere without an unacceptable level of incidents; • Negative impact on design principles – The detailed design will be governed by a set of design principles included within the Outline Environmental Management Plan and agreed by heritage stakeholders; • Negative impact on recent investment – The Visitor Centre is a significant investment, but it is not clear how the new right of way negatively impacts on this; • Potential security risks – While Highways England recognises the security concerns of EHT, it does not consider access by NMUs significantly increases this risk; • Potential negative heritage impacts – The Applicant has updated the OEMP [REP6-011] to include additional design commitments, design principles to guide the detailed design and a robust stakeholder consultation mechanism to consult heritage stakeholders on aspects of the detailed design of the Scheme within the World Heritage Site.
12.1.6	That is a significant impact which will limit the opportunity for many people to access Stonehenge and the World Heritage Site during peak periods.	See Highways England's Response to Written Questions regarding Traffic and Transport, specifically Tr.1.32 [REP2-036] and the Highways England response to EHT's concerns in their WR [REP3-013] paragraphs 28.5.7-28.5.8, identified above. Highways England does not agree with EHT that

		<p>there would be a significant impact which would limit the opportunity for many people to access Stonehenge and the WHS during peak period.</p> <p>In an endeavour to address EHT's concerns, however, the Applicant has made an Additional Submission to the Examining Authority (submitted on 5 August 2019), which comprises an application for non-material changes to the Scheme – for details of the alternative proposals, please see reference NMC-06 in the Applicant's Proposed Changes Application [AS-067].</p>
12.1.7	<p>[In response to CA.2.53]</p> <p>EHT continues to work with Highways England to discuss alternatives and measures to reduce where possible the risks we believe this new PROW introduces.</p> <p>Whilst we welcome the open and constructive dialogue with Highways England we remain concerned that alternative routes (that do not give rise to the risks highlighted in previous EHT Written Representations) are not being pursued. We understand this is because the most viable alternatives fall outside of the 'red line'.</p> <p>EHT understands that Highways England is focusing on amending the existing proposal to deliver, where possible, improvements to the current DCO proposal and we have provided feedback to Highways England on this.</p> <p>However, we remain concerned that our road safety concerns and operational impacts remain – even if attempts are being made to reduce them. Therefore our objection is maintained.</p>	<p>Highways England, in its response to Second Written Questions on Compulsory Acquisition matters [REP6-026], in response to Written Question CA.2.54 provided the following explanation:</p> <ol style="list-style-type: none"> 1. Highways England has been engaged on this matter with English Heritage, Wiltshire Council and other stakeholders since the supplementary consultation in July / August 2018. Following extensive discussions, the 11 alternative public rights of way solutions which were developed for consideration have been reduced to two options for a shared-use cycleway between Longbarrow roundabout and the Stonehenge visitor centre. 2. One of the options is capable of being delivered within the existing Order limits; however, the other would require the acquisition of a small area of land which currently lies outside the Order limits. Both options include areas of highway verge, however, the areas required are significantly less than in the DCO proposal due to Wiltshire Council's relaxation of their requirement for carriage and equestrian rights on the public right of way. 3. Highways England is seeking written confirmation that all persons with an interest in the land outside the Order limits give their consent to the inclusion of that land within the Order limits. It is acknowledged that, without such consent, the additional land could only be secured through the engagement of the procedures set out in the Infrastructure Planning (Compulsory Acquisition) Regulations 2010 ('CA Regulations'). 4. As of deadline 6, Highways England has been carrying out a non-statutory consultation on the two options outlined above (together with consultation on a small number of other proposed minor changes to the

		<p>Scheme) and will be submitting a request to the ExA for a proposed non-material change to this element of the Scheme.</p> <p>As noted above, the Applicant has made an Additional Submission to the Examining Authority (submitted on 5 August 2019), which comprises an application for non-material changes to the Scheme – for details of the alternative proposals, please see reference NMC-06 in the Applicant's Proposed Changes Application [AS-067].</p> <p>As also noted above, Highways England, in its comments on Written Representations [REP3-013] paragraphs 28.5.7 -28.5.8 provided its reasoning on why the alternative route being proposed addresses English Heritage's concerns.</p>
12.1.8	<p>[In response to DCO.2.26]</p> <p>Discussions are on-going. EHT awaits clarification on the proposed covenant from Highways England along with a finalised flow chart showing the process to be followed for any future works.</p> <p>Highways England has indicated that works will be permissible under certain parameters (Technical note 190410) but have not yet made it clear who will be the final arbiter.</p>	<p>The Applicant has discussed the principles of the proposed restriction with the affected landowners and understands the principles are largely agreed with the National Trust (and English Heritage).</p> <p>The Applicant intends to update the next iteration of the DAMS to require appropriate publicity of the tunnel restrictions to ensure that those using the land affected by it are aware of its requirements and the process to be followed for works affected.</p> <p>The purpose of the tunnel restrictions is to protect the integrity of the tunnel. The principles that have been discussed with landowners are to require consultation with Highways England on defined activities that have the potential to affect tunnel integrity. As the body responsible for the safety of the tunnel and with the engineering expertise, Highways England would need to be satisfied that the proposed activity could be conducted without adversely affecting tunnel integrity. Like any other legal interest in land, the ultimate arbiter would be the civil courts in the unlikely event that either party considered litigation to be appropriate.</p>
12.1.9	<p>[In response to DCO.2.37]</p> <p>Please note: all answers provided by EHT regarding the OEMP are based on the DL3 version. We understand a new draft of the OEMP will be submitted at DL6 so EHT will consider our position again following the opportunity to review the new document.</p>	<p>The Applicant welcomes English Heritage Trust's confirmation that it considers the OEMP to be an appropriate mechanism to address design principles, stakeholder consultation and dispute resolution.</p> <p>Since deadline 6 the Applicant has had constructive discussions with English Heritage Trust and other stakeholders on the measures in section 4 of the</p>

	<ul style="list-style-type: none"> i. EHT continues to discuss improvements to the OEMP with the applicant. EHT feels the dispute mechanism proposed in section 4 needs further refinement to ensure it is an effective tool. ii. EHT feels that it is sufficient for matters such as design principles, stakeholder consultation and dispute mechanisms to be included in the OEMP rather than be the subject of specific DCO Requirements if the OEMP is robust. As it is currently drafted we do not feel section 4 of the OEMP is robust enough and therefore a stakeholder consultation and dispute mechanisms may need to be the subject of specific DCO Requirements unless further changes are secured to the OEMP. iii. EHT continues to work with Highways England and other heritage bodies to refine design-related matters to ensure they are sufficiently precise and detailed to be readily enforceable. Work is on-going. 	<p>OEMP [REP6-011]. The Applicant looks forward to receiving specific proposals on the changes English Heritage Trust would like to see in the next iteration of the OEMP. A workshop is being arranged for shortly after deadline 7 with stakeholders with a view to finalising section 4 of the OEMP.</p>
12.1.10	<p>[In response to DCO.2.40]</p> <p>Please see above response to DCO 2.37.</p> <p>EHT feels it would seem more pragmatic to discuss the specific design parameters and commitments together rather than separately. These discussions are on-going with Highways England and HMAG.</p>	<p>The Applicant welcomes English Heritage's support for addressing these issues together in the OEMP. As noted in the response, section 4 of the OEMP was updated at deadline 6 [REP6-011] to incorporate the Design Vision for the Scheme – this will inform the detailed design moving forward.</p> <p>Following further engagement with the heritage stakeholders since deadline 6 the Applicant has submitted at deadline 7 illustrations showing examples of how the design principles could look in practice for key design elements, applying the design vision, principles and commitments. The Applicant is holding a workshop shortly after deadline 7 with a view to finalising section 4 of the OEMP.</p>
12.1.11	<p>[In response to DCO.2.43]</p> <p>See response to DCO.2.37.</p> <p>EHT continues to discuss improvements to the OEMP with the applicant. EHT feels section 4 in the OEMP needs further refinement</p>	<p>Since deadline 6 the Applicant has had constructive discussions with English Heritage Trust and other stakeholders on the measures in section 4 of the OEMP. The Applicant looks forward to receiving specific proposals on the changes English Heritage Trust would like to see in the next iteration of the OEMP. A workshop is being arranged for shortly after deadline 7 with stakeholders with a view to finalising section 4 of the OEMP.</p>

	to ensure future stakeholder engagement is consultative and effective.	
12.1.12	<p>[In response to DCO.2.52]</p> <p>EHT is in general agreement with the design principles but are in on-going discussions with Highways England and so we will be following the various iterations of the OEMP closely.</p> <p>We consider the OEMP is a satisfactory means of achieving these aims but await sight of the next version.</p>	<p>The Applicant welcomes English Heritage Trust's confirmation that it is in general agreement with the design principles and that the OEMP is a satisfactory means of achieving the aims referred to.</p> <p>Since deadline 6 the Applicant has had constructive discussions with English Heritage Trust and other stakeholders on the measures in section 4 of the OEMP. The Applicant looks forward to receiving specific proposals on the changes English Heritage Trust would like to see in the next iteration of the OEMP. A workshop is being arranged for shortly after deadline 7 with stakeholders with a view to finalising section 4 of the OEMP.</p>
12.1.13	<p>[In response to DCO.2.64]</p> <p>Please see EHT response to DCO.2.37.</p> <p>EHT would like to see improvements to section 4 of the OEMP to ensure there is clarity and commitment in regards to the framework for future consultations.</p>	<p>Since deadline 6 the Applicant has had constructive discussions with English Heritage Trust and other stakeholders on the measures in section 4 of the OEMP [REP6-011]. The Applicant looks forward to receiving specific proposals on the changes English Heritage Trust would like to see in the next iteration of the OEMP. A workshop is being arranged for shortly after deadline 7 with stakeholders with a view to finalising section 4 of the OEMP.</p>

13 Historic England (Historic Buildings and Monuments Commission for England) (REP5-013 and REP6-053)

13.1	Comments on Revision 3 of the Draft Development Consent Order [REP4-018]	
	Matter Raised	Highways England's Response
13.1.1	<p>An updated version of the dDCO</p> <p>As stated in our submissions, there are a number of issues that have been raised regarding the d2DCO as currently drafted. These range from the detailed commentary on interpretation and the works provisions through to the general approaches being taken, possible unintended consequences for the historic environment, and an overarching commentary on the extent of our engagement in the sign off of documents. Our submission coincided and crossed with the updated version of the dDCO that Highways England also submitted on 26 June at Deadline 4. We have now had an opportunity to review that document and note that an updated version of the dDCO is due to be submitted on 26 July. We would hope that our submissions will have been taken into account in this updated version. We will review and provide the Examining Authority with commentary on this in due course.</p> <p>Some of the issues we raised in relation to the d2DCO intersect with the development of the DAMS and the OEMP as well as other documentation being produced under the Scheme. The resolution of these issues requires a number of different discussions to draw to a conclusion. The discussions have resulted in further clarification and revisions to the DAMS and similarly additional consultation on the Design Principles incorporated in the OEMP. We are working with Highways England regarding these documents in light of the updated versions being submitted on 26 July to incorporate as many of our</p>	<p>The Applicant has given careful consideration to the matters raised by Historic England in its review of revision 1 of the draft DCO and has responded to the matters raised in its deadline 6 submission [REP6-035]. Since deadline 6 the Applicant and Historic England have held constructive discussions around the matters raised in its review.</p>

	comments as possible before this deadline. We will then review and provide the Examining Authority with commentary on the updated versions of these documents in due course.	
13.1.2	<p>An updated version of the Land Acquisition and Temporary Possession Negotiations Schedule</p> <p>We note that within the Land Acquisition and Temporary Possession Negotiations Schedule that under item no7 there are number of plots of land which are the subject of acquisition. There will need to be a discussion with Highways England on the matter and we will provide an update to the Examining Authority in due course.</p>	The Applicant has engaged, and sought to negotiate with, all persons affected by its proposed compulsory acquisition. The status of negotiations is set out in the Land Acquisition and Temporary Possession Negotiations Schedule [REP6-016 and REP6-017]. The Applicant will continue to engage with all affected landowners on land acquisition. Negotiations led by the Valuation Office Agency have been initiated and will continue through the examination process, and progress will be recorded in future updates to the Land Acquisition and Temporary Possession Negotiations Schedule.
13.2	Responses to the ExA's second round of written questions	
	Matter Raised	Highways England's Response
13.2.1	<p>[In response to DCO.2.14]</p> <p>As the Examining Authority will be aware from our response to the d2DCO on 21 June, we raised a number of points regarding the limits of deviation – see paragraphs 105 – 125 of our submission. However, these points in effect coincided and crossed with the updated version of the dDCO submitted by Highways England on the same date. We note that an updated version of the dDCO is due to be submitted on 26 July and would hope that our earlier submissions will have been considered and addressed as appropriate in redrafting Article 7 in this updated version. We reserve our position to make further comment if our issues remain unaddressed.</p>	<p>The Applicant responded to paragraphs 105 to 125 of the Historic England review document, in its deadline 6 submission (see rows 23 to 26 of [REP6-035]).</p> <p>In respect of article 7(6) the Applicant notes that this provision was updated at deadline 6 [REP6-006] to require the Secretary of State to consider whether persons other than Wiltshire Council should be consulted where an approval is sought under article 7(6). The Applicant has met with Historic England to discuss the intent and effect of these provisions.</p> <p>The Applicant remains of the view that the provision is appropriate and that it would be disproportionate to mandate consultation with Historic England, or indeed other bodies who have made the same request, when the nature of the change may have no bearing on their particular spheres of responsibility. The Applicant considers it is appropriate to allow the Secretary of State to</p>

		form his or her own view, in the light of the change proposed as to the extent of consultation required in the circumstances.
13.2.2	<p>[In response to DCO.2.23]</p> <p>As the Examining Authority will be aware from our response to the d2DCO on 21 June, we set out in paragraphs 140-143 our comments on this draft Article. However our submission coincided and crossed with the updated version of the dDCO submitted by Highways England on the same date. We note that an updated version of the dDCO, is due to be submitted on 26 July. We would hope that our earlier submissions will have been considered and addressed as appropriate in this updated version. We reserve our position to make further comment if our issues remain unaddressed.</p>	<p>Please see the Applicant's response to Written Question DCO.2.22 [REP6-027] which confirms the measures secured under the DAMS and OEMP in respect of intrusive surveys, and in respect of other types of surveys, that would be authorised under article 15.</p> <p>The Applicant would like to note that the reference to paragraphs 5.2.43 to 5.2.44 of the DAMS, in paragraph 1 of its response to DCO.2.22, ought instead to refer to paragraphs 5.2.51 and 5.2.52 [REP6-014].</p> <p>Since deadline 6, the Applicant has held constructive discussions with Historic England on the matters raised in its review of revision.</p>
13.2.3	<p>[In response to DCO.2.26]</p> <p>We commented on the need to ensure the potential to undertake archaeological research in the land above the tunnel in paragraphs 111-115 of our response to the d2DCO on 21 June. Discussions continue with Highways England to address the concerns raised and identify an acceptable solution to enable archaeological work to continue without affecting the stability of the tunnel. We would hope to update the Examining Authority in due course.</p>	<p>The Applicant has discussed the principles of the tunnel protection restrictions with the affected landowners and the principles of the tunnel restrictions are agreed with the National Trust.</p> <p>The Applicant intends to update the next iteration of the DAMS to require appropriate publicity of the tunnel restrictions to ensure that those using the land affected by it are aware of its requirements and the process to be followed for works affected.</p> <p>The purpose of the tunnel restrictions is to protect the integrity of the tunnel. The principles that have been discussed with landowners are to require consultation with Highways England on defined activities that have the potential to affect tunnel integrity. As the body responsible for the safety of the tunnel and with the engineering expertise, Highways England would need to be satisfied that the proposed activity could be conducted without adversely affecting tunnel integrity. Like any other legal interest in land, the ultimate arbiter would be the civil courts in the unlikely event that either party considered litigation to be appropriate.</p>

13.2.4	<p>[In response to DCO.2.37]</p> <p>As the Examining Authority will be aware from our response to the d2DCO on 21 June, we set out in paragraphs 182-183 our comments on this draft Requirement. However, our submission coincided and crossed with the updated version of the dDCO submitted by Highways England on the same date. We have continued to discuss the development of the OEMP with Highways England through heritage design meetings and note that an updated version of the dDCO is due to be submitted on 26 July. We would hope that our submission will have been considered and addressed as appropriate in this updated version and will also continue to contribute to discussion to enhance and refine the design principles in conjunction with the design commitments included in the OEMP. We understand that an updated version of the OEMP is also due to be submitted on 26 July and similarly would hope that those continued discussions will have influenced its further development.</p>	<p>The Applicant expanded the definition of "OEMP" in paragraph (1) of Schedule 2 in revision 4 of the draft DCO [REP6-006] to more clearly reflect the document's function.</p> <p>The OEMP submitted at deadline 6 [REP6-011] included a number of changes to section 4 of the OEMP, further to feedback from Historic England.</p> <p>This includes a number of changes to the Design principles (and a number of additional principles) as well as the incorporation of the Scheme's Design Vision, which will inform the detailed design process. These changes have been supplemented by images demonstrating one way of how the Principles and Vision could look in practice, submitted at deadline 7.</p> <p>Highways England continues to discuss these matters with Historic England; with a workshop planned to take place shortly after deadline 7.</p>
13.2.5	<p>[In response to DCO.2.39]</p> <p>As the Examining Authority will be aware from our comments at Deadline 4 regarding the OEMP, we set out in sections 5-7 our advice regarding the heritage-led approach that was needed to inform the detailed design of the Scheme (the basis for a robust approach to design parameters).</p> <p>HBMCE are continuing to discuss with Highways England the further development of the Design Principles and Design Commitments included in the OEMP.</p> <p>Design Parameters should provide the basis for delivering scheme aspirations and vision. They should set out the requirements for the necessary details to achieve that vision. In relation to this Scheme, this is particularly pertinent because we would expect the design parameters to have the international importance of the WHS at its core, in line with the Department for Transport's cultural heritage objective for the Scheme. We understand that an updated version of the OEMP is due to be submitted on 26 July. We would hope that our previous comments on the OEMP and subsequent advice through</p>	<p>As noted above, section 4 of the OEMP was updated at deadline 6 [REP6-011] to incorporate the Design Vision for the Scheme – this will inform the detailed design moving forward. Section 4 as a whole incorporates the Applicant's response to date to Historic England's request for more detail on design parameters.</p> <p>The Vision explains how the Scheme design will take account of cultural heritage. For example, the first aim of the Vision is described as 'Respecting and Responding to the Historic Landscape' (para 4.2.6); and the Vision for the central section is to sustain the OUV of the WHS and to give due consideration of the objectives and policies of the WHSMP (para 4.2.10). The detail to achieve that vision is contained in the design principles and the design commitments contained in the OEMP [REP6-011].</p> <p>Following further engagement with the heritage stakeholders since deadline 6, the Applicant has submitted at deadline 7 illustrations showing examples of how the design principles could look in practice for key design elements, applying the Design Vision, principles and commitments.</p>

	<p>heritage design meetings will have been considered and reflected in this updated version as the basis for further discussion.</p> <p>HBMCE would therefore ask the Examining Authority to note that further discussions are on-going at this time regarding this issue in order to address the concerns raised.</p>	
13.2.6	<p>[In response to DCO.2.40]</p> <p>HBMCE would ask the Examining Authority to note that further discussions are on-going at this time regarding this issue in order to address the concerns raised, and that consequently we are unable to provide our final view on these matters at this time, but would hope to update the Examining Authority in due course. We would refer the Examining Authority in addition to our responses to DCO.2.37 and DCO.2.39.</p>	<p>Please see the response to item 13.2.5 above. The OEMP was updated at deadline 6 [REP6-011] to include a Design Vision for the Scheme, to include further design principles and to update the approach to stakeholder consultation on design.</p> <p>Since deadline 6, constructive discussions have been held with the Historic England and other stakeholders on these matters. The Applicant has arranged a workshop to be held shortly after deadline 7 with a view to finalising section 4 of the OEMP.</p>
13.2.7	<p>[In response to DCO.2.43]</p> <p>As the Examining Authority will be aware from our response to the d2DCO on 21 June, we set out in paragraph 184 our comments on this draft Requirement. However our submission coincided and crossed with the updated version of the dDCO submitted by Highways England on the same date. We note that an updated version of the dDCO is due to be submitted on 26 July and would hope that our submission will have been considered and addressed as appropriate in this updated version. As noted in our submission discussions continue on this matter between HBMCE and Highways England, and also discussions are taking place through heritage design meetings on the OEMP in which regard we would refer the Examining Authority to our response to DCO.2.37 in relation to on-going consultation. We reserve our position to make further comment if our issues remain unaddressed.</p>	<p>The OEMP was updated at deadline 6 [REP6-011] to include a Design Vision for the Scheme, to include further design principles and to update the approach to stakeholder consultation on design.</p> <p>Since deadline 6, constructive discussions have been held with the Historic England and other stakeholders on these matters. The Applicant has arranged a workshop to be held shortly after deadline 7 with a view to finalising section 4 of the OEMP.</p>
13.2.8	<p>[In response to DCO.2.48]</p> <p>HBMCE would refer the Examining Authority to our response above to question DCO.2.43. We remain in discussion with Highways England in relation to how we can best fulfil our statutory role and the level of our engagement in the various elements of the Scheme,</p>	<p>The OEMP submitted at deadline 6 [REP6-011] included a number of changes to section 4 of the OEMP, further to feedback from Historic England.</p> <p>This includes a number of changes to the Design principles (and a number of additional principles) as well as the incorporation of the Scheme's Design Vision, which will inform the detailed design process. These changes have</p>

	including development of the detailed design. We would hope to update the Examining Authority on the progress of that discussion in due course. We reserve our position to make further comment if our issues remain unaddressed.	<p>been supplemented by images demonstrating how the Vision, principles and commitments could look work in practice, submitted at deadline 7.</p> <p>Highways England continues to discuss these matters with Historic England; with a workshop planned to take place shortly after deadline 7 which will discuss, amongst other matters, how the consultation process in relation to detailed design is envisaged to work.</p>
13.2.9	<p>[In response to DCO.2.51]</p> <p>In our Written Representations (7.6.24) HBMCE indicated that whilst it is possible that some aspects of lighting for the Scheme might be comfortably addressed at Detailed Design Stage, sufficient indication of the parameters for decision making must be subject to Examination. We advised that this might be addressed through production of a lighting strategy for the Scheme. In relation to the tunnel portals specifically (7.6.50) we advised that clarification regarding how light levels will be managed at these points in the landscape to avoid any harm to Attribute 4 of the OUV of the WHS. Subsequently HBMCE have continued through heritage design meetings in relation to the OEMP to discuss the provision for lighting design at the tunnel portals and elsewhere where there is potential for the WHS to be affected. We understand that an updated version of the OEMP is due to be submitted on 26 July and would hope that these issues will have been addressed as appropriate in this updated version. We would hope to update the Examining Authority further on this matter in due course once we have reviewed the updated OEMP. We reserve our position to make further comment if our issues remain unaddressed.</p>	<p>The Applicant has maintained throughout the examination that the Scheme will be largely unlit and has confirmed this through the design commitments in the OEMP [REP6-011] (measures D-CH8 to D-CH12). Included amongst these design commitments are D-CH9 which commits the tunnel portal lighting to being designed to minimise light spill outside of the portals' footprint. Compliance with this commitment is secured through requirement 4.</p> <p>In respect of other areas of lighting design, section 4 of the OEMP requires consultation with the Stakeholder Design Consultation Group on signing and lighting at the new Longbarrow junction and Countess junction, and on the external appearance of the portals' structures. As noted elsewhere, a workshop is planned for shortly after deadline 7 with a view to finalising section 4 of the OEMP.</p>
13.2.10	<p>[In response to DCO.2.52]</p> <p>In our Written Representations (7.6.67-71) HBMCE highlighted the need for further information regarding the design of PRowS to ensure that the approach was appropriate and sensitive to the historic landscape. We indicated that discussion on the design approach would continue as part of the iterative discussion of design principles during the Examination period. Subsequently HBMCE have continued through heritage design meetings in relation to the</p>	<p>As noted above, section 4 of the OEMP was updated at deadline 6 [REP6-011] to incorporate the Design Vision for the Scheme – this will inform the detailed design moving forward.</p> <p>This Vision explains how the Scheme will be heritage influenced. For example, the first aim of the Vision is described as 'Respecting and Responding to the Historic Landscape' (para 4.2.6); and the Vision for the central section is to sustain the OUV of the WHS and to give due consideration of the objectives and policies of the WHSMP (para 4.2.10).</p>

	<p>OEMP to discuss the PRoW design and how the needs of the various user groups can be balanced with the need for appropriate management of the rights of way whilst ensuring in all cases that the final design reflects and responds to the international significance of the landscape. We understand that an updated version of the OEMP is due to be submitted on 26 July and would therefore hope to update the Examining Authority further on this matter in due course once we have reviewed the updated OEMP. We would ask the Examining Authority to note that discussions continue on this matter between HBMCE and Highways England through heritage design meetings on the OEMP.</p>	<p>In relation to PRoWs, controls for these are set out at measures P-PRoW1-4 of table 4.1 of the OEMP; which acknowledge the need to balance the interests of all users but recognise the need for material finishes to be sympathetic to the setting of the WHS. Section 4 of the OEMP also includes a commitment to consult with the SCDG on public rights of way including wayfinding, surfacing, materials, fencing and gating within the WHS.</p> <p>There are also design commitments in respect of PRoWs at D-CH26 and D-CH27.</p> <p>These measures were set out in the version of the OEMP submitted at deadline 3 [REP3-006], and built on the controls at D-CH3, D-CH14 that formed part of the application OEMP.</p>
13.2.11	<p>[In response to DCO.2.64]</p> <p>As the Examining Authority will be aware from our response to the d2DCO on 21 June (paragraph 191) this was a new provision in the d2DCO. We understand that the Council, in their "Response to Highways England Comments on Deadline 3 submissions" at paragraph 2.11 refer to the draft DCO for the A303 Sparkford to Ilchester Scheme and that within this draft DCO requirement 5 in Schedule 2 part 1 has provisions relating to "details of consultation". This provides that the report to be submitted to the Secretary of State must set out the consultation undertaken, the response of the undertaker to that consultation and enclose a copy of all consultation responses. This would appear to provide greater clarity around the consultation process and may be a necessary provision to consider further.</p> <p>In addition to this HBMCE remains in discussion with Highways England in relation to how best to fulfil our statutory role. There would need to be engagement with HBMCE to provide assistance in ensuring that the appropriate safeguards for the historic environment are in place in the dDCO. Further discussions will be required regarding the extent of engagement including in relation to what would constitute an appropriate consultation mechanism in this situation and its form in the DCO. We would hope to update the</p>	<p>Please see the Applicant's response to Written Question DCO.2.63 [REP6-027]. In summary the Applicant has adopted the proposed wording, save for the wording requiring the submitted details to reflect the consultation responses. This is because the Applicant considers the legal duty to consult, which includes the duty to conscientiously consider responses, is well understood and there is no need to make further provision.</p>

	<p>Examining Authority on the progress of that discussion in due course.</p> <p>We reserve our position to make further comment if our issues remain unaddressed.</p>	
13.2.12	<p>HBMCE consider that, in our statutory role, it is appropriate for us jointly with Wiltshire Council (as local planning authority) to provide independent confirmation to the Examining Authority (and through it to the Secretary of State) that the final version of the DAMS document is appropriate and proportionate in relation to international obligations, the requirements of national policy (NPSNN 5.140) and all relevant published guidelines and standards.</p> <p>As noted above, discussions continue with Highways England in relation to how best to fulfil our statutory role and the level of our engagement in other elements of the Scheme. We would hope to update the Examining Authority on the progress of that discussion in due course.</p>	<p>The Applicant would refer the Examining Authority to its response to the ExA's Written Questions - Cultural Heritage [REP6-022], Question CH.2.1. Highways England would of course welcome HBMCE's and Wiltshire Council's confirmation on these matters but notes that no special provision needs to be made for this; rather the confirmation would be made via final submissions to the examination. Highways England does not agree that it is appropriate for Historic England and Wiltshire Council to have the final decision on the form and content of the Detailed Archaeological Mitigation Strategy (DAMS). The DAMS is being developed in consultation with Historic England and other members of HMAG. Given the unprecedented level of consultation and input from statutory bodies and members of HMAG, Highways England considers that the Secretary of State is the competent authority to approve the form and content of the DAMS as a requirement of the DCO. With regard to the implementation of the measures in the DAMS, Highways England is content that this will be subject to monitoring and approval by Wiltshire Council, in consultation with Historic England (where the relevant works would ordinarily require Scheduled Monument Consent), as provided for in the DAMS submitted at Deadline 6 [REP6-013].</p> <p>Highways England does not anticipate having to make provision for the DAMS not being approved by the Secretary of State in its final form at the end of examination, but if it did, its starting point would be to adopt an approach consistent with other highways NSIPs, providing for subsequent approval by the Secretary of State, after consultation with Wiltshire Council and Historic England. Highways England would be willing to provide further detail on this question in the unlikely (in Highways England's opinion) event that it seems possible that the DAMS will not be agreed to an extent that the Secretary of State would want further work to be done before approving and certifying the document.</p>

13.2.13	<p>vi. HBMCE remains in discussion with Highways England in relation to how best to fulfil our statutory role and the level of our engagement in the various stages of the Scheme and how this is set out in the DAMS and in relation to the approval of SSWSIs and provision of advice in unexpected circumstances. However, we note and welcome the Examining Authority's question on unexpected finds and its suggestion and will look to discuss this further with Highways England and the extent to which it could be dealt with as part of any process for approval of an addendum or new SSWSI.</p>	<p>The Applicant would refer the Examining Authority to its response to the ExA's Written Questions - Cultural Heritage [REP6-022]), Question CH.2.1.</p> <p>Highways England has proposed in response to Written Question CH.2.1 that unexpected finds would be dealt with through a further SSWSI to be approved by Wiltshire Council, in consultation with Historic England (to the extent the works the subject of the approval would ordinarily trigger the need for scheduled monument consent), where a further or amended SSWSI is required following consultation with HMAG / WCAS about the unexpected find. The requirement for a site consultation meeting to consider the significance of the find is intended to agree the appropriate course of action and determine whether the existing SSWSI adequately provides for this. The DAMS submitted at deadline 6 reflects this change [REP6-013, p. 80, paragraph 6.1.18].</p>
13.2.14	<p>viii. We currently remain in detailed discussions regarding this issue and await the results of further analysis of the evaluation results from the Scheme to assist in identifying the most appropriate strategy in response to the archaeological significance of the remains in the plough zone. We are aware that an updated version of the DAMS is due to be submitted on 26 July and would hope that this will have addressed our comments to date including the comments we have made in HMAG and Scientific Committee meetings.</p>	<p>The DAMS submitted at deadline 6 sets out updated proposals for ploughzone artefact sampling, following further discussions with Historic England and other members of HMAG [REP6-013, p. 84 – 85, paragraphs 6.3.15 and 6.3.16]. The updated proposals provide for a reflexive strategy for further sampling of the ploughzone to be developed in consultation with Wiltshire Council and Historic England and, for sites within the WHS, HMAG. Statistical analysis of the distribution of the artefacts recovered during the archaeological evaluations will be developed to inform the identification of a representative sample size and distribution for further investigation, Highways England acknowledges that, in some areas, a sample of up to 100% of the artefact content of the ploughsoil may be required, combined with a systematic sample to capture background distributions and transitional areas. The strategy will adopt a reflexive approach such that the sample size may be increased locally in response to the results of the systematic sampling.</p>
13.2.15	<p>In HBMCE's summary of oral submissions during the Issue Specific Hearing on Blick Mead (7.4.2) we recommended that if any further monitoring was conducted in relation to Blick Mead it would be beneficial for it to follow the recommendation given in sections 5.1 and 5.2 of Historic England's Preserving Archaeological Remains guidance, and in Appendix 4 of that guidance (1.4 and 1.5). This</p>	<p>As set out in paragraphs 11.10.1 of the Environmental Statement [APP-049], as no likely significant adverse effects are identified for the water environment at Blick Mead no monitoring of significant effects is required or proposed. The OEMP sets out monitoring to be undertaken during the construction stage to ensure that the mitigation measures embedded in the scheme design are appropriately implemented. It is not necessary to agree specific details at the</p>

	would ensure that the results of any such monitoring would be able to take account of the effect on archaeological remains.	<p>pre-consent stage and therefore no locations at Blick Mead or elsewhere have an express requirement to monitor.</p> <p>However, there are commitments to monitoring and to the development of action plans as set out at items MW-WAT10 and MW-WAT15 of the OEMP [REP6-011].</p> <p>The Applicant confirms that monitoring of surface water and groundwater is ongoing at Blick Mead even though this is not required to inform or confirm the assessment of the effects of the Scheme because all effects were found to be non-significant at Blick Mead. This monitoring is being undertaken in accordance with Historic England's Preserving Archaeological Remains guidance.</p>
13.2.16	Our request for further visualisations reflects the significance of specific visual relationships between monuments but also of the experience of those relationships gained from moving around and being immersed within the landscape. We would also refer the Examining Authority to our response to question LV.2.3 at Deadline 2.	The Applicant is undertaking additional visualisations. These are being submitted at deadline 7.
13.2.17	HBMCE remains in discussion with Highways England regarding the additional visualisations that we have requested. We understand that Highways England are working on other visualisations and we therefore hope to be able to update the Examining Authority on our view of the visual effects once all these visualisations have been submitted in due course.	The Applicant is undertaking additional visualisations following discussions with Historic England. These locations include covering views from Yarnbury Camp, across land east of Parsonage Down and Blick Mead and Vespasian's Camp. These images are being submitted at deadline 7.
13.2.18	We have now had an opportunity to review the submitted d3DCO and note and welcome the amendment that has been made in draft Requirement 8 through the inclusion of a new provision which refers to a landscaping scheme being subject to consultation with the planning authority and HBMCE. However we note that this would only be in relation to the World Heritage Site and Work No4, and we concur with the Examining Authority's question as to why this is just limited to Work No 4. As has been set out in our Written Representations at paragraph 7.6.36, an iterative design approach is required, and the critical assessment at this stage is in relation to its landscape integration and the minimisation of negative effects as a	See the Applicant's response to Written Question LV.2.6 in the Responses to the ExA's Written Questions - Landscape and Visual [REP6-030].

	result of the overarching engineering and structural design.	
13.2.19	<p>an appropriate methodology would need to be agreed to identify significant deviation from the model to enable decisions to be taken in a timely manner to protect archaeological remains if necessary, This might potentially form a decision tree that could be included in the OEMP and related to the DAMS as necessary. The Highways England engineer should consider providing the contractor with acceptable quantitative vibration and settlement limits forming parameters to any such decision tree. Further detail on the methodology for predicting the vibration effects will need to be set out with information on the results of that modelling exercise, and if possible, an assessment of the probability of exceeding those results. There will also need to be a process for calibrating the predictions prior to commencement of the tunneling.</p>	<p>As set out in responses to Written Questions Ns 2.7 & 2.8 [REP6-031], the Outline Environmental Management Plan (OEMP) was revised at deadline 6 [REP6-011]. MW-NOI5 secures the provision for consultation with the members of HMAG in regard to identification of potentially vibration sensitive cultural heritage assets and actions to control or mitigate impacts (including monitoring). The approach proposed by Historic England in terms of setting suitable thresholds and identifying potentially sensitive assets etc. is in line with that proposed by Highways England in their response to Ns.2.7 and Ns.2.8 once the detailed design and detailed tunnelling methodology are finalised.</p>

14 Mr R Parsons (REP5-031)

14.1	Written summary of oral submission made at the compulsory acquisition hearing held on 9 July 2019	
	Matter Raised	Highways England's Response
14.1.1	<p>Pointed out it was unlikely that rather than use the new bridleways to be constructed either side of the new carriageways users of the byways would not take a 5 mile detour towards Winterbourne Stoke before doubling back on themselves to find themselves at a point directly opposite on the northern side from where they started on the southern side. Users would simply use the existing crossing facilities which are being unaltered' rendering the proposed byways unnecessary.</p> <p>Also pointed out that none of the designers appear to have an understanding of equine behaviour as it is highly unlikely that any competent or experienced horseman/ horsewoman would subject their horse to using the new byways due to the levels of noise that will occur from that stretch of road.</p>	<p>Please see response to agenda item 8.1 in the Written Summaries on Oral Submissions regarding Compulsory Acquisition (CA) at deadline 5 [REP5-002] which explains that the purpose of the new PRoW routes on the north and south sides of the existing A303 was to provide a route for NMUs, as there is a demand for both north/south and east/west routes across the area.</p> <p>Please see response to Agenda item 8.1 in the Written Summaries on Oral Submissions regarding CA at deadline 5 [REP5-002] which explains that the new PRoW to the south and north of A303 would be offset from the carriageway and there would be separation between the dual carriageway and the byway.</p> <p>These submissions build on the discussions at the Traffic and Transport Issue Specific Hearing, see items 4.1 to 4.4 of Highways England's post hearing submissions [REP4-034] which explains further why these new rights of way are appropriate.</p>
14.1.2	<p>The provision of the byways was stated to be Government Policy however is it really essential that in all cases Government Policy be followed if it adds unnecessary cost to the project without any quantified benefits. The proposal adds cost to the scheme and to the policy costs of Wiltshire County Council who have to manage the rights of way network in this strategically important location with severely limited funding.</p>	<p>To demonstrate the Value for Money that the Scheme offers, the costs of the Scheme must be compared with the expected positive and negative impacts. The appraisal approach has been designed to capture these impacts as fully as possible, in a way that is proportional. In some case this approach involves assigning monetary values to the benefits. However, there are some impacts where there is no reliable approach to assigning monetary values, or indeed to assigning any form of quantifiable value, this should not be interpreted as the impact having no value.</p> <p>The existing A303 alignment would be converted to a byway which will promote walking and cycling. Green bridges are proposed which ensures existing public rights of way across the alignment of the new road are</p>

		<p>maintained. Existing public rights of way for crossing the proposed tunnel section will become more attractive for active modes as the traffic is moved from the surface to the tunnel. Reduced traffic levels and associated severance affects in Winterbourne Stoke would encourage users in this area to travel via active modes. Overall, one of the key benefits of the Scheme is improved provision for NMUs, helping encourage use of more sustainable modes of transport for local journeys and encourage local people to explore the WHS safely on foot, bicycle or horse back, and this route will help facilitate that benefit.</p> <p>To form a holistic view on Value for Money for this Scheme, all sources of benefits and disbenefits (including indicative monetised impacts and nonmonetized impacts) have and should be considered.</p>
14.1.3	Highways England have failed to consider alternative proposals put forward for the location of the byway as they have had an over reliance on Government Policy.	<p>Proposed NMU routes have been developed in consultation with Wiltshire Council's Rights of Way Officer. See items 4.1 to 4.4 of Highways England's post hearing submissions following the Traffic and Transport Issue Specific Hearing [REP4-034] which explains how the public rights of way proposals at this location were developed, including the consideration of alternatives.</p>

15 Barry Garwood (REP5-028)

15.1	Comments on REP4-036	
	Matter Raised	Highways England's Response
15.1.1	<p>Let us consider how much concrete would be needed to construct twin bore tunnels, each 2.9 km long and 13m wide. It is understood that a minimum 5.2m height is required, with dual width roads being at least 7m wide.</p> <p>Pythagoras' theorem confirms an internal bore of close to 9m.</p> <p>An overall tunnel bore of 13m is specified, giving internal and external radii of 4.5m and 6.5m respectively, indicating walls around 2m thick.</p> <p>Hence the tunnel lining will have a volume, $V = (6.5^2 - 4.5^2) \times \pi \times 2900 \times 2 = 400,000\text{m}^3$.</p> <p>The tunnels alone will require around 400,000m³ of lining, with what will presumably be reinforced concrete.</p> <p>Typical densities for concrete are around 2400 kg per m³. Carbon dioxide emissions from concrete production can be up to 0.5 kg per kg of reinforced concrete made, largely because of the high cement content, although steel is also significant.</p> <p>The carbon footprint of building the tunnels could be around of 400,000 tons of carbon dioxide emissions, or close to this, depending on the grade of concrete used.</p> <p>This is in addition to any other concrete used for bridges, flyovers, slip roads, cuttings, portals and any other infrastructure.</p>	<p>The Applicant's assessment of greenhouse gas (GHG) emissions including carbon emissions as a result of the Scheme is set out in Chapter 14 of the Environmental Statement (ES) [APP-052]. In particular we note the detailed description of the assessment methodology, which is set out at section 14.3 of this Chapter. As stated in paragraph 14.3.2, the emissions assessment has been conducted in line with guidance contained within Highways England's IAN 114/08 – Highways Agency Carbon Calculation and Reporting Requirements (Ref 14.2) and supplemented by use of Highways England's Carbon Reporting Tool. The approach set out in IAN 114/08 is in line with the World Business Council for Sustainable Development / World Resources Institute Greenhouse Gas Protocol guidelines.</p> <p>The assessment set out in Chapter 14 of the ES concludes that there will be no significant effects on climate at either construction or operational stage from the Scheme (please see section 14.9 and the 'Climate' section of Chapter 16, Summary of Effects [APP-054]).</p> <p>Please also see response to item 44.4 in the Comments on Written Representations Report submitted at deadline 3 [REP3-013] which summarises (as set out in Chapter 14, Section 14.9, paragraph 14.9.11) the ES assessment of carbon emissions, reiterating that the Scheme will not have a material impact on the ability of the UK Government to meet its carbon reduction targets. The response to item 44.4 also puts this assessment into the context where the case for the Scheme has been identified: the proposed road improvement is needed to address the local and regional demands arising from the current issues with the road and to deliver the objectives set for the Scheme.</p>

	This seems an extraordinary high amount for a few kilometres of road and takes no account of the increase in operational emissions from a higher road capacity.	
15.1.2	<p>The total carbon footprint of the scheme may seem much smaller than the total carbon budget set by the IPCC, but let us remember that it is the total carbon budget for all mankind for all time.</p> <p>The obvious conclusion is that we can't continue building more and bigger roads, with ever increasing traffic volumes, without negatively impacting on climate change to the point that global warming will be out of control within a few decades.</p> <p>We need to start changing our ways.</p> <p>Government policy needs to move away from building ever more roads. Continuing as at present will have a catastrophic and irreversible effect on the environment within a small number of years.</p> <p>I submit that the adverse effect on climate change is grounds for rejecting these proposals</p>	<p>The Applicant notes the views of Mr Garwood and wishes to make no further comment on these, other than to clarify that the ES and subsequent responses to the Examining Authority's written questions identified no significant effect on climate at construction or operational stage as a result of the Scheme (see Chapter 14, section 14.9 [APP-052] and our response to the Examining Authority's First and Second Written Questions CC.1.6 [REP2-028] and CC.2.1 and CC.2.5 [REP6-025]).</p>
15.1.3	<p>Highways England wants to bulldoze around the visible group as though it were a discrete asset, rather than a continuous landscape.</p> <p>Invisible features count for little to Highways England, English Heritage and Historic England who all support this scheme. The exception seems to be where preserving an invisible feature makes a case for the scheme, such as the proposal to reconnect a short section of the Avenue.</p>	<p>The Applicant respectfully states that there is not a 'want' to bulldoze around the WHS, nor do invisible features 'count little' for Highways England and other Stakeholders.</p> <p>With reference to REP3-013, paragraph 52.1.4 seq. and 'invisible monuments', the preferred route was carefully chosen to minimise effects on archaeology (including monuments that have had their surface earthworks ploughed out and buried archaeological remains), and a comprehensive programme of archaeological evaluation surveys has informed the Scheme design to limit direct physical impacts as far as practicable, including limiting impacts on archaeological remains that contribute to the OUV of the WHS. The design has been carefully chosen in order to preserve archaeological remains along the 2 mile section of tunnel, improve the setting of many heritage assets and asset groups in the central part of the WHS including the Avenue, Stonehenge itself and the Winterbourne Stoke barrow group; remove the intrusive sight and sound of traffic from the existing A303 as far</p>

		<p>as possible within the WHS; and design a scheme that is minimally intrusive in both the western and eastern parts of the WHS, including in key views from assets groups that contribute to the OUV of the WHS. Examples of how the design has been developed to limit impacts on archaeology include, but are not limited to, the choice of a northern bypass of Winterbourne Stoke, the reduced footprint and land take for Rolleston Corner, and the design and placement of the western and eastern tunnel portals and portal approaches in areas that have been shown to have limited archaeological remains within their footprint. Further information can be found in the Assessment of Alternatives, ES Chapter 3 [APP-041] and in ES Chapter 6, Cultural Heritage [APP-044, Section 6.8, Table 6.9]. The cultural heritage assessment, reported in ES Chapter 6, identifies the effects on known archaeological features whilst recognising the benefits that the tunnel will deliver for the WHS landscape as a whole.</p> <p>The Applicant welcomes the acknowledgement of the Scheme preserving and reconnecting the Avenue. Please also see the Applicant's response to item 44.3.15 in the Comments on Written Representations [REP3-013] relating to The Avenue.</p>
15.1.4	<p>The repositioning of the roundabout to the south-west appears to be an attempt to place it outside the WHS. However there is talk of extending the WHS to the west as well as to the north.</p> <p>As such the proposal is to destroy a large area of what is a unique and archaeologically rich landscape, more of which is likely to be adopted as part of the WHS, at some point.</p>	<p>Please see the response to Agenda item 6 (ii) in the written summaries of oral submissions put at ISH2 regarding Cultural Heritage [REP4-030] which addressed the approach to Longbarrow junction and explains that assets outside of the WHS that contribute to attributes of OUV were taken into account. Therefore, if a buffer zone was established or the WHS boundary extended, the Applicant would have already assessed and had regard to the impact on such assets that would fall within the buffer or extended boundary. Further detail is provided in the Applicant's response to Written Question CH.1.58 [REP2-025].</p>

16 PJ Rowland & Sons and Mr C A Rowland (REP5-032, REP6-069 and REP6-078)

16.1	Table Title	
	Matter Raised	Highways England's Response
16.1.1	<p>The representation concerned Plot 11-09 as the adjoining land owners Beacon Hill Land in their presentation queried the extent of the red line boundary and the need to use Compulsory Acquisition Powers to create the new Allington Track. They also queried the need to use compulsory acquisition powers extending beyond the present confines of the existing track. Tim Harper on behalf of Highways England stated that the width of the new Allington Track would be 5.5 metres but no accurate levels had yet been taken or any detailed design and that the additional land beyond the existing track land to be compulsorily acquired was for utility services.</p>	<p>Please see the Applicant's response to agenda item 8.1 in the Written Summaries of Oral Submissions regarding Compulsory Acquisition [REP5-002]: in particular the Applicant's submissions on pages 2-28 – 2-29 and 2-32, which explain the Applicant's approach to and proposals for the new Allington Track.</p>
16.1.2	<p>On my client's behalf I stated that this was the same answer that had been provided to us so there would be a duplication of utilities either side of the new track for as yet unknown purposes, as the type of utilities has not been specified. My client has subsequently measured the width of Allington Track which is currently 5.5metres and which on the southern side has a 4 metre verge.</p> <p>The examining authority should further examine Highways England to determine what width is required to establish the new Allington Track including a verge either side into which any drainage requirements can be installed. Simply relying on compulsory acquisition powers in advance of any detailed design and level survey is an over provision as once the power is available to Highways England it will be used to ensure the scheme if approved will go ahead.</p>	<p>Please see the Applicant's response to agenda item 8.1 in the Written Summaries of Oral Submissions regarding Compulsory Acquisition [REP5-002], in particular the Applicant's submissions on pages 2-32 regarding the proposed width of the new Allington Track, and on pages 2-09 – 2-10 regarding the Applicant's position on not acquiring more land than is actually required to deliver the Scheme.</p>

16.2	Response to ExAs Second Round of Written Questions	
	Matter Raised	Highways England's Response
16.2.1	<p>The detailed design of the services required should be available but it is understood a full level survey has not been commissioned which shows once more the lack of foresight by the applicant in being prepared to answer perfectly reasonable questions without having to resort to the use of compulsory purchase powers to achieve a result available by other means, none of which appear to have been employed thus far by the applicant.</p>	<p>The reasons for which land is required at plot 11-09 are detailed in the Applicant's response to Second Written Question CA.2.41 [REP6-026]. Highways England will look to reach agreement with the landowner regarding the purchase of this land. However, the compulsory acquisition powers sought in the Application are reflective of the fact that the application for development consent is, necessarily, submitted on the basis of a preliminary design. Further detail will become available in due course, as the scheme design is progressed to the detailed design stage. However, at this stage it is imperative that the Applicant is able to ensure the deliverability of the Scheme and powers to use or acquire land are therefore sought on that basis.</p>
16.2.2	<p>As I live at Ratfyn Farmhouse and will have the elevated portion of the flyover being visually intrusive together with potential light pollution as well following construction and with to date no visual displays available as to what I will be overseeing I am strongly of the opinion that there should be a consultation about this so the design is publicly visible including the intended noise reduction walls. I can then make an informed opinion but to date the applicant appears to not have factored in how the visual appearance will change from summer when everything is in full leaf to the middle of winter when there will be no leaf.</p>	<p>As is normal for large infrastructure schemes, the Applicant has not completed the detailed design. However, sufficient information is available for the Applicant's proposals to be understood and for its environment effects to be assessed. There are illustrative images of the Countess flyover in Figure 6-18 on page 6-19 of the Design and Access Statement [APP-295] as well as photomontages from the A345 with [APP-145 and APP-146]. The Engineering Section Drawings [APP-010 and APP-011] also show the height and extent of the flyover, subject to the limits of deviation.</p> <p>The Applicant has considered how the visual appearance will change from summer to winter as the landscape and visual impact assessment [APP-045] which informs the design process is undertaken for these seasons. The height of the flyover as it crosses the Countess junction will remain below the height of the mature trees bordering the existing roundabout and the intervening vegetation between Ratfyn Farmhouse and the Countess junction as illustrated in [APP-145 and APP-146].</p> <p>In terms of lighting, the Scheme proposes to replace the existing lighting at Countess with a modern system, as set out in paragraph 2.3.51 of [APP-040] The Proposed Scheme. This obligation is secured through measure D-CH12</p>

		<p>of the Outline Environmental Management Plan (OEMP) [REP6-011]. Therefore, the Applicant considers that there would be an improvement to the existing lighting and that the 1.8-metre-high environmental screens adjacent to the flyover would prevent light trespass.</p> <p>With reference to the Environmental Masterplan [APP-059] the indicated design includes new planting between the flyover and the slip roads, so that even when not in leaf there is a density of vegetation adjacent to the structure, in addition to the 1.8-metre-high environmental screens which will be a permanent screen to light throughout the seasons. The provision of the screens along the north and south edges of the Countess Junction Flyover are secured through measure D-NOI2 of the OEMP [REP6-011] and the detailed landscaping design, which must be based on the mitigation measures detailed in the Environmental Statement, must be approved by the Secretary of State. Requirement 4 of the draft DCO [REP6-005] requires the Applicant to comply with the OEMP.</p>
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17 Classmaxi Ltd (REP5-011)

17.1	Written summary of oral submissions made at the compulsory acquisition hearings held between 9 and 10 July 2019	
	Matter Raised	Highways England's Response
17.1.1	Classmaxi (and its predecessor the Amesbury Property Company Limited), object to the proposed compulsory acquisition/ temporary possession of its land by HE for the purposes of carrying out the works required to achieve the closure of the Allington Track and Byway AMES1 junctions onto the A303 on the basis that the proposed compulsory acquisition/ temporary possession of its land is unnecessary to achieve HE's objectives, unjustified in the public interest, and a disproportionate interference with its private rights.	Please see response to agenda item 8.2 in the Written Summaries of Oral Submissions report regarding Compulsory Acquisition (CA) at deadline 5 [REP5-003], in particular please refer to the submissions set out on pages 2-34 to 2-35.
17.1.2	In summary, the agreed alternative proposal contained in the Heads of Terms involves Classmaxi granting HE a licence over such of its land as is reasonable necessary for the purposes of HE carrying out the relevant works and then Classmaxi dedicating the newly constructed Allington Track Diversion and Byway AMES1 Diversions as public highways maintainable at public expense. In return, HE agrees not to implement the compulsory acquisition/ temporary possession powers of the DCO as they relate to the Classmaxi land.	Please see response to agenda item 8.2 in the Written Summaries of Oral Submissions report regarding CA at deadline 5 [REP5-003], in particular please refer to the submissions set out on pages 2-34 to 2-35. Please also refer to the Applicant's responses to Second Written Questions CA.2.2, CA.2.28 and, in particular, CA.2.36 [REP6-026], which explain the position that has been agreed between the parties in relation to the future use and dedication of land for the purposes of the Scheme.
17.1.3	However, Classmaxi hereby reserves its right to supplement its (written and oral) representations and/or attend the second CAH in person (currently scheduled for 21 and 22 August 2019) in the unlikely event that a prompt agreement with HE and WC giving legal effect to the Heads of Terms is not finalised, or some insuperable impediment to such an agreement is identified.	Please see response to agenda item 8.1 in the Written Summaries of Oral Submissions report regarding Compulsory Acquisition at deadline 5 [REP5-003], in particular the submissions set out on pages 2-34 to 2-35. The Applicant notes Classmaxi's request for an additional compulsory acquisition hearing to be held prior to the close of the examination but is conscious of the fact that the further hearings now scheduled by the Planning Inspectorate for late August 2019 do not include a compulsory acquisition

		<p>hearing. However, as Classmaxi's purpose in requesting a hearing appears to be to secure an opportunity to inform the Examining Authority of any lack of progress in negotiations, the Applicant considers that should any such updates be necessary (which would not be the Applicant's wish), they could be adequately provided in written submissions, reflecting the nature of the DCO examination as a primarily written process.</p>
17.1.4	<p>As particularised in its written representations, Classmaxi wishes to retain the freehold ownership of its land so as to be able to limit what future improvements (unrelated to the DCO scheme) might be able to be undertaken to increase the capacity, or nature, of the presently proposed highway works which could enable development of adjacent land to take place without having to properly compensate it for any increased development value of that adjacent land which might result from such future improvements or modifications.</p>	<p>Please see response to issue 36.1.1 in the Applicant's 8.18 Comments on Written Representations report [REP3-013].</p> <p>In particular, paragraph 36.1.5 states:</p> <p>"Highways England intends to reach a voluntary agreement with CM prior to the close of the examination, to avoid the exercise of compulsory acquisition powers. Discussions with APC/CM are continuing to achieve this. However, until such an agreement is concluded the Applicant must continue to seek the compulsory powers necessary to deliver the Scheme."</p> <p>The Applicant does not accept that CM would not achieve fair financial consideration under the statutory compensation code should compulsory powers be exercised.</p> <p>And paragraph 36.1.20 states:</p> <p>"In line with the compulsory acquisition guidance, Highways England will continue to seek the compulsory acquisition powers sought within the DCO for the works associated with the Allington Track until all necessary private agreements have been concluded in order to ensure the deliverability of the Scheme."</p> <p>The Applicant is content to enter into an agreement with Classmaxi to provide for the Applicant's use, and Classmaxi's dedication, of the land, for the purposes of the Scheme.</p>
17.1.5	<p>As to question 12.2 on the Agenda, Classmaxi reiterated its position set out in its response to EXQ CA.137 dated 2 May 2019 (copy attached at Annex C) as to whether the Classmaxi land, over which compulsory rights over land powers are sought by HE, would be no less advantageous than it was before when burdened with such</p>	<p>Please see response to agenda item 12.2 in the Applicant's Written Summaries of Oral Submissions made at the Compulsory Acquisition Hearing held on 9 and 10 July 2019, as submitted at deadline 5 [REP5-002]. Please refer, in particular, to the submissions (including a post-hearing note) on pages 2-41 to 2-42, in which the Applicant's position is explained. In</p>

rights pursuant to section 132 of the Planning Act 2008.

summary, it is anticipated that the land in question will be required for the diversion of statutory undertakers' apparatus. The works would be temporary, and the future maintenance of the apparatus would not affect the way in which the land is enjoyed. Where possible, the utilities would be laid beneath the highway, rather than within the open space land itself.

Therefore, the Applicant considers that, in the event that a power to acquire rights compulsorily over the Classmaxi land was necessary, the land would be no less advantageous than it was before being subject to such rights.

18 West Amesbury Farm and Mrs P M Sandell (REP5-027, REP6-079)

18.1	Written summary of oral submissions made at the compulsory acquisition hearings held between 9 and 10 July 2019	
	Matter Raised	Highways England's Response
18.1.1	<p>On behalf of Mrs. Sandell I raised the question as to why when the scheme was designed that the scheme had been designed that did not give Park Farm West Amesbury access to the Countess Road as currently Park Farm has three access points to the A303, but after the scheme as currently designed these access points will be extinguished. This is despite raising this as early as 2016. Suggestions have been made about getting a route out via Countess Farm, but the National Trust have suggested Countess Farm is held inalienably but have not produced the proof and neither have Highways England provided the proof. It was pointed out therefore that if the land is held inalienably Highways England will have to use the powers available to them to construct an access across Countess Farm to get an access to the Countess Road.</p>	<p>Access to Park Farm (West Amesbury)'s land on the south side of the A303 is off Stonehenge Road. The main access to the bowtie field (to the north of the A303) is via an underpass beneath the A303 from land to the south (and therefore also off Stonehenge Road). Stonehenge Road is currently accessed either via the existing A303 or via the local highway network within Amesbury. The bowtie field also currently has one access directly off the A303. Park Farm does not currently benefit from an access directly off Countess Road. The creation of such an access route would require the grant of appropriate rights over land secured either by agreement with the relevant third party landowner or through the exercise of powers of compulsory acquisition. In either case, the provision of such access would require land, or rights over land currently owned by a third party.</p> <p>The Scheme proposals would convert part of the existing Stonehenge Road into a restricted byway but would provide a private means of access (over the route of that restricted byway) benefitting Park Farm in order to maintain the existing accesses to land on the south side of the existing A303. If the Scheme was implemented, access to the bowtie field would no longer be via the underpass, but instead a new private means of access would be provided over the existing A303 and through plots 08-18 and 08-19 to reach plot 08-21, which would be returned to the owners of Park Farm following its temporary use for the construction of the scheme.</p> <p>These proposals have been discussed with the landowners and occupiers in various meetings since the issue of access was initially raised in 2016. Highways England confirms its position that in developing the Scheme design it has considered the access requirements for Park Farm and its proposed design would provide reasonable and appropriate access arrangements by</p>

		maintaining existing accesses where possible to minimise land acquisition impacts on third parties. The third party landowner (National Trust) that would be impacted by the creation of an alternative new access for Park Farm off Countess Road via Countess Farm has confirmed that it would not be willing to enter into an agreement for such purposes and would object to any proposed compulsory acquisition of its land; and the subject of the land's inalienability is irrelevant to the issue of creating access to Park Farm.
18.1.2	On the issue of restrictions as to operations over the Tunnel it was pointed out to the Examiners that the restrictions had been negotiated by Highways England with both HMAG and National Trust but Mrs. Sandell as the affected owner due to the location of the Eastern Portal was excluded from the negotiations and the detail was presented as a <i>fait accompli</i> . The details of the restrictive covenants were available to the National Trust but not to my client despite the advocate indicating they had been made available. What is available are the terms of the intended restrictions but not the wording of the restrictive covenants in a legal form, which are still awaited as of today's date. The production in draft form of these covenants require urgent action by Highways England.	<p>Please see the Applicant's response to agenda item 8.2 in the Written Summaries of Oral Submissions made at the Compulsory Acquisition hearing held on 9 and 10 July 2019, which was submitted at deadline 5 [REP5-002], and which states:</p> <p>"Mr Richard Turney responded that Highways England has always proposed covenants for the purpose of protecting the tunnel and has been clear about that. The detail of the restriction is regarding engineering and operational matters for protection of the tunnel, but it is true to say the detail was made available to the National Trust at an earlier stage of negotiation than to Mr Smith. However, they are not terms which have been agreed between the National Trust and Highways England and imposed on a third party – rather they are terms which Highways England need to protect the tunnel.</p> <p>Mr Smith has the same details of the restrictive covenants and the principles have been known to those who have received the notices in respect of the land as shown by the pink hatched land at surface and subsoil level."</p> <p>The legal form of the restrictive covenant is currently being drafted and will be shared with the land owners for discussion and negotiation as soon as possible.</p>
18.1.3	On behalf of West Amesbury Farm the question was raised again concerning access to the Countess Road post construction which has not been allowed for in the present design. We have previously provided details of likely vehicular movements that are in existence at West Amesbury Farm on its present scale, and the present design will mean all of these movements will be rerouted through Amesbury town centre which will include grain lorries both empty and full,	Noted. The Applicant has had regard to the details provided on likely vehicular movements for West Amesbury Farm, and these have been used and considered in part of the assessment referred to below, as was noted in Highways England's response to Second Written Questions Ag.2.5 [REP6-019].

	fertiliser lorries again full and empty, livestock lorries and tractors towing large equipment.	
18.1.4	<p>The answer given by Highways was that it was possible for all of the above to legally use Amesbury town centre, however what is possible from a plan of the existing lay out and what is practicable on any given day is very different. Movement through Amesbury town centre is regularly restricted by poorly parked or incorrectly parked vehicles which then involves waiting time until the obstacle is cleared. Further delays can be expected in passing through the road narrowing restrictions in Church Street before negotiating the road bridge over the River Avon to gain access to Stonehenge Road. Doubts still remain about the ability to continue to be able to use the road bridge over the River Avon.</p>	<p>Please see the Applicant's response to Second Written Question Ag.2.5 [REP6-019], which clarifies the position of Highways England:</p> <p>"The Applicant considers that access to West Amesbury Farm and Park Farm for all agricultural and heavy goods vehicles, with the exception of combine harvesters, can be achieved using the existing road network and without the need for establishing an alternative route. This has been concluded following an analysis of vehicle movements of the types required by Mrs Sandell and Mr Sawkill for Park Farm and West Amesbury Farm respectively. The Applicant is thus satisfied that the existing highway alignment through Amesbury is satisfactory to facilitate all movements except for a combine harvester with a towed header unit."</p> <p>Highways England understands the concerns of the affected parties in relation to incorrectly parked vehicles affecting this access, but it is considered that this is a matter for the local authority, given the highway network is designed and categorised sufficiently to permit such vehicle use. The road bridge over the River Avon has been assessed and is appropriate for such vehicles, and any change to this use by Wiltshire Council would be subject to consultation and discussion with key users.</p>
18.1.5	<p>Additionally, West Amesbury Farms cannot physically drive their combine through Amesbury, due to its turning circle, to access their land at Stockport Farm Amesbury or undertake their stubble to stubble contracts on 150 acres on the Durnford Estate which is the opposite side of the road to Stockport Farm, or undertake their obligations on 600 acres at Fox Farm Amport. The National Trust have put forward a proposal about using an existing trackway as combine access however they do not appear to have grasped that Mrs. Sandell has to be a party to this as the route from West Amesbury Farm to the trackway offered includes passage across her land. The offered option is unacceptable as it does not deal</p>	<p>Please see the Applicant's response to Second Written Question Ag.2.5 [REP6-019], which clarifies the position of Highways England on the combine harvester access under point 4:</p> <p>"It is agreed that combine harvesters are not able to use [the access through Amesbury], and an alternative has been proposed crossing National Trust land to the north to reach Countess Road. The National Trust has offered a route across their land to provide an access between Park Farm and West Amesbury Farm for combine harvester access only. It is intended that this access would be arranged by private agreement outside of the DCO."</p>

	<p>sufficiently with all the access concerns and required traffic management. The National Trust also raised an objection on the basis that any new route to Countess Farm would increase traffic within the World Heritage Site. This was refuted as no additional traffic would be created as the traffic already enters the World Heritage Site to get to West Amesbury Farm, they would simply be taking an alternative route and is not an intensification of use.</p>	<p>Given West Amesbury Farms already holds an agreement to farm land owned by Mrs Sandell, access over this land is already in place to benefit West Amesbury Farm for passage over the sections of the access route within her ownership to enable West Amesbury Farm to reach the section of the access route offered by the National Trust. Therefore, it is not considered that Mrs Sandell should be a party to the agreement to grant such a right, although it is understood that Mrs Sandell should be a party to the agreement to benefit from the combine harvester access rights over National Trust's land.</p>
18.1.6	<p>[In response to CA.2.42 cont.]</p> <p>Finally it was pointed out that the issue needs to be seen in the broader context of the tunnel, as providing the alternative means of access via Countess Farm will remove the practical impediment to progress negotiations with Highways England.</p> <p>To date there has been no response received, no further negotiations have taken place and progress is zero. This access issue is for the scheme promoter to address and not for The National Trust to decide.</p>	<p>Highways England has set out its position clearly in its response to Second Written Questions Ag.2.5 [REP6-019] and CA.2.43 [REP6-026]. It is further set out in this submission. Highways England considers that a reasonable and appropriate replacement access solution is included as part of the Application and separately offered through agreement to address the access issue raised in respect of West Amesbury Farm and Park Farm. This solution incorporates the use of the existing highway network and existing accesses where possible and an offer, in writing, from the National Trust to provide access for combine harvesters, which (as distinct from any other type of vehicle) have been assessed as requiring an alternative access. Providing an alternative access via Countess Farm is not considered to be necessary or appropriate, and any compulsory acquisition proposals required to deliver land to support such an access could not, in the Applicant's opinion, be justifiable on the basis of having a compelling case in the public interest.</p>

19 Morrison and King Ltd (REP5-016 and REP6-083)

19.1	Written summary of oral submission at CA hearings	
	Matter Raised	Highways England's Response
19.1.1	<p>Within the document TR010025 - 4.1 Statement of Reasons the Applicant asserts the following:</p> <p><i>1.4.3 The Applicant has attempted to acquire all interests in the Land by agreement but unfortunately due to the scale of the Scheme and the timescales within which it is required to be brought forward, this has not been possible to achieve. It is necessary to seek powers of compulsory acquisition in the DCO application, in order to ensure that; in the event that the on-going negotiations to acquire land by agreement are ultimately unsuccessful in relation to any part of the Land, the Scheme is not precluded from being delivered. The Applicant is satisfied that all of the land interests identified for compulsory acquisition are required to enable the Scheme to proceed.</i></p> <p><i>4.11.1 As well as consulting all persons with an interest in the Land about the Scheme proposals in accordance with section 42 of the PA 2008, the Applicant is aware of the requirement (paragraph 25 of the CA Guidance) to seek to acquire land by negotiation wherever practicable. The power to acquire land compulsorily should only be sought if attempts to acquire by agreement fail.</i></p> <p><i>4.11.3 The Applicant has engaged with all landowners and occupiers with a view to acquiring their land</i></p>	<p>Please see response to Agenda item 8.1 in the Written Summaries of Oral Submissions made at the Compulsory Acquisition Hearing held on 9 and 10 July 2019 and submitted to the examination at deadline 5 [REP5-002].</p> <p>In particular, in response to this matter, on page 2-28, Mr Richard Turney, on behalf of the Applicant explained:</p> <p>“Mr Richard Turney responded to the items raised in turn and noted that whilst Mr Read had referred to the Statement of Reasons [APP-023] paragraph 4.11.1, he had not acknowledged paragraph 4.11.2, which refers to further CA Guidance which states that where proposals would entail the compulsory acquisition of many separate plots of land, it is not always practicable to acquire each plot of land by negotiated agreement; in that scenario, “it is reasonable to include provision authorising compulsory acquisition covering all the land required at the outset” (paragraph 25).”</p>

	<p><i>interest by agreement by writing to them to inform them of the Applicant's willingness to negotiate to acquire the Land by agreement and to invite dialogue on this point. As a result the Applicant is in the process of engaging with all landowners with regard to the acquisition of land by agreement and negotiations with this objective will be ongoing throughout the DCO process.</i></p> <p>These assertions in no way reflect my clients' experience. Whilst there have been a number of meetings and telephone conversations, the sole item of substantive paperwork supplied by the Applicant to date has been a redacted version of a past agreement under Section 253 of the Highways Act 1980 relating to four oak trees.</p>	
19.1.2	<p>On numerous occasions over a very long period of time, I have explained to the Applicant that all of their objectives in respect of my clients' property can be achieved by agreement. Furthermore, I have indicated that my clients are, subject to contract, willing and able to enter into the requisite agreements. To date, with the minor exception referred to above, no substantive proposals have been received, indeed no meaningful paperwork whatsoever has been received despite repeated requests.</p>	<p>The Applicant has engaged, and sought to negotiate with, all persons affected by its proposed compulsory acquisition. The status of negotiations is set out in the Land Acquisition and Temporary Possession Negotiations Schedule [REP6-017]. This version has been updated since the Compulsory Acquisition Hearings. The Applicant will continue to engage with all affected landowners on the acquisition of land and rights. Negotiations led by the Valuation Office Agency have been initiated and will continue through the examination process, and progress will be recorded in future updates to the Land Acquisition and Temporary Possession Negotiations Schedule.</p>
19.1.3	<p>Plot 09-12 Compulsory acquisition of permanent rights and temporary possession of land. Across this plot the Applicant is seeking to install service apparatus, a water main and possibly an electricity cable. Such rights could be secured by agreement by the grant of easements and licence to undertake necessary works. The proposed temporary compound and stockpiles could be secured by agreement by way of a licence to undertake works and a commercial lease. To date, none of these options have been pursued by the Applicant.</p>	<p>Please see response to agenda item 8.1 in the Written Summaries of Oral Submissions made at the Compulsory Acquisition Hearing held on 9 and 10 July 2019 and submitted to the examination at deadline 5 [REP5-002].</p> <p>In particular, in response to a follow up question by the Panel, Mr Richard Turney (for the Applicant) (page 2-30) explained:</p> <p>"The ExA asked why agreement could not be reached as opposed to compulsory purchase and wished for further clarity on the use of the space in the compound for the utility.</p>

		<p>“Mr Richard Turney responded to clarify the misunderstanding of the nature of the powers sought in respect of this site. There is a compulsory acquisition of rights in respect of utilities to be laid, and it is possible that this can be dealt with as a matter of agreement, subject to reaching satisfactory agreement such that the need to exercise those compulsory acquisition powers is avoided. Under temporary possession there is no compulsory acquisition. This is less amenable to being dealt with by agreement although it may be that proposals could be made in that respect. However, this is not compulsory acquisition”.</p>
19.1.4	<p>Plot 09-22 Compulsory acquisition for tree planting. This could be secured via a Section 253 Agreement without resorting to compulsory acquisition. (This is also stated in Morrison and King’s response to Second Written Question CA2.46 [REP6-083]).</p>	<p>Please see response to agenda item 8.1 in the Written Summaries of Oral Submissions made at the Compulsory Acquisition Hearing held on 9 and 10 July 2019 and submitted to the examination at deadline 5 [REP5-002].</p> <p>Mr Richard Turney (for the Applicant) further explained (at page 2-30):</p> <p>“Mr Richard Turney responded to a further point made by Mr Read, regarding the imposition of a compulsory power as opposed to compulsory acquisition, and the assertion that the Scheme could still be achieved through another method than compulsory imposition, such as a lease. There is compulsion in the exercise of a statutory power, and this is the way that DCOs are managed for many cases, there is nothing unusual in this approach. Regarding the land plots, such as these discussed where the site compounds are located, the location of the Order limits in this instance is partly dictated by field boundaries, so powers are sought in respect of a field and the understanding here is that the line referred to reflects the field boundary. Highways England will commit to take these points away for further discussion with Mr Read in respect of this site”.</p> <p>Please also refer to the Applicant’s response to the Examining Authority’s Second Written Question CA.2.47 [REP6-026] which explains the Applicant’s efforts in relation to a proposed agreement with Morrison and King Limited under section 253 of the Highways Act 1980 in respect of plot 09-22.</p>

19.2	Response to ExAs Second Round of Written Questions	
	Matter Raised	Highways England's Response
19.2.1	<p>CA.2.37</p> <p>i. I fail to see how this proposal helps 'conserve and enhance the WHS' being a considerable distance from the designation boundary. It also appears to be significantly overstating matters to suggest this short stretch of dead-end footpath terminating at the verge of the A303 could in anyway 'provide a positive legacy for local communities'.</p> <p>ii. Such a suggestion has been put to the Applicant on numerous occasions over a considerable length of time. To date no paperwork whatsoever has been received from the Applicant. For the avoidance of doubt, in common with virtually all compulsory powers sought in respect of my clients, alternatives have been proposed to achieve the same objectives by agreement. Subject to contract, my clients would be willing to proceed on that basis however no response has been received and we still await an initial substantive written response from the Applicant on all such proposals.</p>	<p>i. As explained in REP2-029, the proposal contributes to the achievement of the Scheme's objectives of helping to conserve and enhance the World Heritage Site and provide a positive legacy for local communities by creating safer Non-Motorised User connections.</p> <p>ii. Highways England is seeking to reach agreement with the affected party where possible and will be providing draft agreements in the near future. A commitment to follow this process has been made by the applicant to the affected landowner.</p>
19.2.2	<p>CA.2.46 i. Despite my client expressing a willingness, subject only to contract, to proceed by way of a Section 253 Highways Act 1980 Agreement, no negotiations have been initiated by the Applicant nor a substantive written proposal received.</p> <p>ii. The plot is required for tree planting and my client is willing, subject only to contract, to enter into an agreement to undertake such work. In view of this willingness to achieve the objectives of the Scheme by agreement, powers of Compulsory Acquisition are not, in my opinion, justified. The Applicant needs to engage, apply adequate resource and conclude the plethora of private agreements proposed</p>	<p>i. As detailed within Written Question response for CA.2.47 i [REP6-026], the Applicant is willing to enter into a section 253 agreement however until detailed design this cannot be actioned. A commitment to follow this process has been made by the Applicant to the affected party.</p> <p>ii. As detailed within the Applicant's response to the Examining Authority's Second Written Question CA.2.47 ii [REP6-026], plot 09-22 is required for essential mitigation for the Scheme. In the first instance Highways England will have sought compulsory acquisition powers to ensure this can be provided. The willingness of the affected party to achieve the objectives of the Scheme by agreement</p>

	by affected parties, without inappropriately relying upon compulsory powers.	will enable Highways England to enter into an agreed form of section 253 agreement at the point of detailed design. Agreement in principle as to the scope of the terms of that agreement can be pursued now in readiness for that.
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20 Beacon Hill Ltd (REP5-016)

20.1	Written summary of oral submission made at the compulsory acquisition hearing held between 9 and 10 June 2019	
	Matter Raised	Highways England's Response
<p>Highways England have responded to Beacon Hill Land Ltd.'s oral submission in Section 8.1 of the Written summaries of oral submissions put at Compulsory Acquisition Hearings [REP5-002], items 25.4.20 and 35.2.20 in the Comments on Written Representations Report [REP3-013], and in CA.2.2 and CA.2.39 in Response to the ExA's Written Questions – Compulsory Acquisition, Temporary Possession and Other Land or Rights Considerations (CA.2) submitted at deadline 6 [REP6-026].</p> <p>The comments within REP6-083 are addressed within the Morrison and King section of the report.</p>		

21 Mrs Kathleen Edna Crook (REP5-016)

21.1	Written summary of oral submission made at the compulsory acquisition hearing held between 9 and 10 June 2019	
	Matter Raised	Highways England's Response
21.1.1	<p>Plots 11-22 / 11-23 / 11-25 /11-28 I refer to my previous comments above in respect of these plots.</p> <p>I concluded this section of my oral submission requesting that the Applicant be directed to engage with my clients expediently and with adequate resource to conclude binding alternative arrangements to secure the Scheme objectives without resorting to compulsory powers.</p>	<p>The Applicant's written summary of oral representations made at the Compulsory Acquisition Hearing [REP5-002], in Section 8.1 (page 2.28-2.29) stated:</p> <p>"Mr Richard Turney [on behalf of the Applicant] explained There is ... the issue of making sure these agreements are in place and that all parties are in a position to grant the required rights. The normal way of reaching these is on condition of the performance of the land owner of certain obligations that allow the Applicant not to rely on those DCO compulsory acquisition powers, so that in the event of default, the Scheme is not frustrated by the contractual default of a particular party."</p> <p>The Applicant will continue to engage with Mrs Crook with the aim of agreeing how the land-take requirements for the Scheme, insofar as they affect Mrs Crook's land interests, may be dealt with by agreement, outside the Compulsory Acquisition process.</p>
21.1.2	<p>The treatment of the stopped-up Allington Track surface. Attention was drawn to my clients' concerns regarding the conflict that exists between their stated objective to undertake a tree planting scheme upon the stopped-up section of the Allington Track and the Applicant's proposed treatment of piercing but leaving in situ the existing tarmacadam surface.</p> <p>Since the hearing the Applicant has indicated that it is willing to amend the treatment to see the existing surface removed to enable tree planting.</p>	<p>Mrs Crook's Written Representation focussed on her concerns about leaving the surface of the stopped up Allington Track in situ, or if it was perforated before covering it with soils it would be effectively "discarding in open countryside an area of brownfield built environment".</p> <p>The Applicant's written summary of oral representations made at the Compulsory Acquisition Hearing [REP5-002], in Section 8.1 (page 2.28-2.29) stated:</p> <p>"The former Allington Track and the issues regarding stopping up are dealt with through agreement and dedication which shows the position can be achieved</p>

		<p>without compulsory acquisition and the same could be achieved for Plot 11-08. Plot 11-10 was responded to in Highways England's response to Written Representations (paragraph 32.3.4 of [REP3- 013]) and is needed for utility works, not for works to the hedgerow as was noted by Mr Read. In Plot 11-25 the rights are required for utility provision. Regarding the surface of the Allington Track, this will be taken away by Highways England for further discussion with Mr Read and his clients. In light of this, the updated OEMP provided at deadline 6 will include a commitment to break out the surface of the decommissioned Allington Track."</p> <p>Accordingly, this matter is addressed in the deadline 6 Outline Environmental Management Plan (OEMP) [REP6-011 and REP6-012], at item PW-LAN3, which requires the preliminary works contractor to break out the road surface of the redundant Allington Track. The OEMP is secured in the draft Development Consent Order (dDCO) [REP6-005], in Requirement 4 of Schedule 2.</p>
21.1.3	<p>The proposed 'no dig' method of working within the temporary compound and stockpiles to be situated within Plot 09-12 give rise to very great concerns regarding likely adverse impacts upon the existing topsoil. The known archaeological features across this plot will almost certainly prevent my client from undertaking the usual deep cultivations required as part of an aftercare package to address soil compaction. The proposed vehicle movements associated with the stockpiling of 100,000 cubic metres of dug material, together with the works compound requirements will lead to soil compaction. I urge that the Applicant looks again at the 'no dig' proposal and considers stripping the existing topsoil, albeit under appropriate archaeological oversight, thereby mitigating soil compaction likely that will severely and adversely impact all future agricultural endeavours my client.</p>	<p>The Applicant is committed to a no-dig method of working within Plot 09-12 due to the known existence of Early to Middle Saxon settlement remains above the floodplain (UID 4039: these assets are assessed as of High value (see APP-212, pages 77-78), as well as the presence of a Neolithic pit (UID4040, assessed as of Very High value – see APP-212, page 78) and Neolithic flintwork (UID 4041), and a stone-built Roman building of uncertain function (UID 4042, assessed as of Medium value (see APP-212, page 79).</p> <p>The agricultural land classification across the Plot has been determined by field survey and is Grade 2 (very good quality). The soils are mainly medium to heavy clay loam and generally deep with no impediment (rock/chalk) to 1,200mm; stone content is slight (generally <5% stones over 2cm). There is a defined topsoil layer (medium clay loam) to approximately 280mm.</p> <p>The main works contractor will be required to design a no-dig solution that mitigates the adverse loads from the temporary works pavements in order to minimise compaction in the underlying subsoil.</p> <p>Any compaction in the underlying topsoil can be remediated by ploughing according to normal agricultural practices. As the land has been in agricultural/arable production for many years it is to be assumed that the archaeological assets in the topsoil have already been compromised.</p>

		<p>However, compaction in the subsoil would require remediation by ripping once the construction platform is removed, which would damage the archaeology present beneath the ploughed layer: this would be unacceptable. Retaining the topsoil in place would act as a buffer to reduce the effects of compaction in the subsoil.</p> <p>This design will need to comply with the Outline Soils Management Strategy (OEMP items PWGEO3 and MWGEO3 [REP6-011] and include specifications for the height and load of stockpiles, and for the construction of the temporary works pavements for the compound and access road. The design will include an appraisal of the extent and depth of compression and compaction in the in-situ soils, and the means by which to ameliorate adverse effects.</p>
21.1.4	<p>The Countess Farm grain-handling facilities - My client has very real concerns regarding the drainage proposals in and around Countess farmyard and the possibility of adverse impacts upon its grain handling facility. The Applicant's email of 13th June 2019 makes reference to 'the rise in water predicted by the tunnel' which is not where this concern arises from but rather the road scheme surface water drainage proposals. More worrying was confirmation contained within the same email 'the team were not aware of the pump or the grain store at the time the surveys were taken of the groundwater: No satisfactory response nor solution has been provided by the Applicant to date</p>	<p>The highway drainage system carries surface water discharge from the highway via carrier pipes to treatment areas. The provision of the treatment areas ensure that there is no additional risk of flooding. The Road Drainage Strategy [REP2-009] defines the proposed highway surface water drainage strategy, Section 5 East of Tunnel describes the illustrative design for the treatment and attenuation of surface water runoff from the highway which includes the Countess Roundabout.</p> <p>Requirement 10 of Schedule 2 of the DCO (APP-20) sets out that written details of surface water drainage proposals for each part of the Scheme must be approved by the Secretary of State, and that these details must be based on the mitigation measures included in the Environmental Statement (ES), which include the Road Drainage Strategy.</p>
21.1.5	<p>The working hours and proposed uses within Plot 09-12 conflict very heavily with my client's adjoining horse livery business. All assessments undertaken within the EIA were from a human perspective and not that of horses, which are significantly more sensitive to noise, dust, lights etc. The Applicant has confirmed this in its Comments on Written Representations May 2019 37.7.3 - 37.7.6 Further assurances or alternative solutions continue to be sought</p>	<p>As detailed in our previous response 37.7.3- 37.7.7 to Morrison & King in Highways England Comments on Written Representations [REP3-013], details of the construction compounds are provided in ES Chapter 2 [APP-040], with the locations shown on the General Arrangement Drawings [APP-012] and indicative layouts shown in ES Figure 2.7 [APP-061]. This illustrates that the compound area itself (within Plot 09-12) is over 100m south of the boundary with the livery. Activities at the Countess satellite compound are primarily associated with vehicle movements and delivery of materials. The main activities in the compound have been located towards the southern end, away from the livery, with the intervening area between those activities and the livery allocated for soil</p>

		<p>stockpiling which will provide some noise screening, as set out in MW-G28 of the Outline Environmental Management Plan (OEMP) [REP6-011]. The main construction compound at Longbarrow junction is where the main construction activities (for example supporting operation of the TBM and processing of waste materials) will be located. Normal working hours for the Countess satellite compound (within Plot 09-12) are restricted from the standard core working hours to 07:30-18:00 Monday to Friday and 07:30-13:00 Saturday, plus one hour start-up and one hour shut down as set out in the OEMP. MW-G14 and PW-G4 permits maintenance on Saturday afternoon and 09:00-17:00 on Sundays. MW-G28 of the OEMP set out measures in relation to compounds including a requirement for site hoarding which will also provide some noise screening. Other mitigation measures secured in the OEMP include a requirement to use 'Best Practicable Means' to minimise noise from the works, the use of less intrusive reversing alarms, acoustic enclosures, and screening of equipment (MW-NOI1). There would be liaison between the contractor and land owners/tenants to avoid particularly sensitive issues arising, in particular the agricultural liaison officer will be available to discuss the specific needs of the livery once construction commences and will seek to ensure that unexpected noise incidents are minimised (MW-COM3). The OEMP is secured by Paragraph 4 of Schedule 2 to the draft development consent order [REP6-005].</p> <p>With regard to dust there are no experimental data on maximum safe dust levels for livestock and good agricultural practice simply dictates that livestock are not housed in dusty conditions; and, livestock kept outside are usually able to move away from dusty conditions. Likewise, the legislation (The Welfare of Farmed Animals (England) Regulations 2007, HMSO, 1st October 2007) only refers to dust once and only with regard to housed livestock and buildings; the livestock welfare codes (Code of Recommendations for the Welfare of Livestock, DEFRA) make no additional reference.</p> <p>Response 37.7.3- 37.7.7 in HE Comments on Written Representations [REP3-013], also sets out that, in practical terms dust emissions would be managed across the whole construction area and these measures are considered to be protective for livestock, designated ecosystems and public exposure. Dust mitigation measures, based on standard best practice, are secured through MW-AIR1 of the OEMP. Regarding lighting, the contractor will design, position and</p>
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		<p>direct temporary lighting to prevent unnecessary disturbance as secured in item MW-G29 of the OEMP.</p> <p>As set out in the Applicant's response to Ag.1.26 Response to Examining Authority's Written Questions 8.10.2 Agriculture [REP2-022]) regarding research into the effects of noise on livestock the report 'High speed 2 Limited, Phase 1, Noise Effects on Livestock (236118-57/R01), February 2017 is a useful source of information. That report included a literature review with includes the following conclusions in relation to horses:</p> <ol style="list-style-type: none"> There is no strong evidence of long-term effects of environmental noise on heath in livestock, including horses. This is partly due to an absence of studies but also an absence of effects; Horses have more sensitive hearing than humans, in terms of greater sensitivity at higher frequencies, but agricultural activities can be noisy and livestock habituate to noise; Animals will respond to acute noise exposure with 'fright reaction' and acute physiological arousal including increase cortisol but there is evidence that livestock, including horses adapt over time to exposure to noise. <p>As part of the HS2 study the British Horse Society were consulted who advised that over time horses become habituated to loud noise.</p> <p>Construction of the Scheme would result in elevated noise levels at times, but generally the noise would be reasonably steady dominated by engine type lower frequency noise, with few high-level noise 'events'. It is noted that the OEMP (D-NOI4) commits to no impact pilling in the vicinity of Countess roundabout, which could have been a source of regular high-level noise events.</p> <p>As previously stated in response 37.2.18 (Highways England Comments on Written Representations [REP3-013]), any claims relating to loss of business due to construction of the project should be submitted to Highways England and will be assessed independently by the valuations office.</p>
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22 Travelodge Hotels Ltd (REP5-026 and REP6-066)

22.1	Table Title	
	Matter Raised	Highways England's Response
22.1.1	<p>The acquiring authority have taken no steps at all to engage with the landowner and their advisors to take reasonable steps to acquire the land and rights by agreement. No heads of terms have been produced or provided to date. Given we have been in regular contact for over 3 years with the acquiring authority this is a failure on their part;</p> <ul style="list-style-type: none"> Compulsory Purchase should be the last resort. For this scheme it is the only resort; 	<p>See Highways England's Written Summaries of oral submissions made at Compulsory Acquisition Hearing held on 9 and 10 July 2019, submitted at deadline 5, [REP5-002] which confirms that there has been engagement with Travelodge and attempts to engage with the Freeholder. These steps of engagement are recorded in the Applicant's Land Acquisition and Temporary Possession Negotiations Schedule [REP6-016], and engagement is ongoing.</p>
22.1.2	<p>The inadequacy of the Promoting Authority to engage in any form of meaningful negotiations and whether they have met their obligations in accordance with Government Circular 06/04;</p> <ul style="list-style-type: none"> Para 1.4.3 of the SoR states the applicant has attempted to acquire all interests in the land by agreement – can they confirm what those steps were? The table at 9.2 of the SoR sets out the current status of negotiations with each landowner. Page 9-95 is the page for Travelodge. Under the column "Status of Negotiations with land interest" it states: <ul style="list-style-type: none"> "Negotiations have begun" – they haven't "Looking to have an agreement in place during examination" <p>– no such agreement has been released by the acquiring authority.</p>	<p>The Applicant has engaged, and sought to negotiate with, all persons affected by its proposed compulsory acquisition. The status of negotiations is set out in the Land Acquisition and Temporary Possession Negotiations Schedule [REP6-016], demonstrating that an initial letter was sent by the Applicant on 19/10/2018 stating that they would like to open negotiations about the acquisition of land. The agent for Travelodge did respond asking for further detail about the land required but a request for a proposed agreement was not forthcoming. The Applicant will look to enter into an agreement with the affected party if they are open to it; the Applicant is willing to discuss potential heads of terms in the first instance.</p>

22.1.3	<p>Impact on the Business</p> <p>The existing A303 will need to be closed during the construction of the new flyover over the Countess Roundabout. It is not clear how long this section of the A303 will be closed for, what the diversion plans, whether access will be retained for local businesses are and how frequently closures will occur.</p>	<p>Please refer to the Applicant's Written Summaries of oral submissions made at the Compulsory Acquisition Hearing held on 9 and 10 July 2019 [REP5-002] which explains (at page 2-26) that Travelodge will have the same access to site as they do now, and that the existing A303 would also remain open during the construction of the Scheme.</p> <p>The Transport Forecasting Package [APP-301], Appendix F sets out the traffic management assumptions used for assessment of construction impacts, and paragraph 2.3 pertains to Countess roundabout. The OEMP [REP6-011] MW-COM1 sets out the requirement to consult with land owners on access to premises during construction, MW-TRA2 in planning traffic management measures, and MW-TRA9 sets out a requirement to maintain access (including through the provision of temporary access routes where necessary).</p>
22.1.4	<p>Travelodge are concerned about how the interaction between construction vehicles (HGV's etc) and its customers all of whom will share the same access point during the construction of the scheme. There is no consideration of public safety and management of what will be a pinch point with traffic backing up onto the Countess Roundabout.</p> <p>There are concerns that inadequate details have been provided to Travelodge such as hoarding, if accesses may need to be temporarily diverted/re-routed at any stage in order for the business to make preparations to notify existing businesses and users of the service station.</p>	<p>Details of the access and egress from the construction compounds will be designed by the main works contractor in due course to suit the intended construction methodology. The OEMP [REP6-011] sets out a range of requirements with which the main works contractor will be required to comply, in order to ensure that safety and amenity are maintained. For example, item MW-COM1 in the OEMP requires the contractor to engage with landowners and occupiers in relation to accommodation works and construction access. Items MW-TRA4 and MW-TRA5 in the OEMP set out requirements relating to the planning and management of the highway network for the purposes of construction site access.</p> <p>The potential options which the Applicant anticipates will be available to the contractor include:</p> <ol style="list-style-type: none"> 1. Separate dedicated means of entry/exit access adjacent to services site. This would involve construction of dedicated accesses directly on/off the A345 Countess Road immediately east of the Travelodge entry road from A303. 2. Use of existing services entry and exit routes, use of overflow car park for entry and exit routes (as illustrated on Environmental Statement Figure 2.7 [APP-061])

		<p>3. Adapted entry slip to facilitate a dedicated compound access, with give-way arrangement for exit access at overflow car park.</p> <p>Highways England will continue to engage with Travelodge to understand their concerns and to determine which option would be most suitable and what accommodation works may be required in connection with the selected option. In addition, the main works contractor will be required to liaise with Travelodge in accordance with item MW-COM1 in the OEMP.</p>
22.1.5	<p>A significant proportion of the site is identified as being required for the “permanent acquisition of rights”. No details have been provided by the Promoting Authority on what those rights are and how they might affect the site. We understand the intention is to breach the existing fenceline to import and export materials into the satellite compound including a major stockpile.</p> <p>How will the Promoting Authority ensure the position of this compound and stockpile not materially impact the enjoyment and use of Travelodge’s site including its hotel?</p>	<p>Please refer to the Applicant’s Written Summaries of oral submissions made at the Compulsory Acquisition Hearing held on 9 and 10 July 2019 [REP5-002] which explain (at pages 2-26 – 2-27) that the nature of the interest being sought by way of compulsory acquisition is limited to the permanent acquisition of rights over the land parcel for the purposes described in the draft DCO (at Schedule 4) [REP6-005] and in the Statement of Reasons (at Annex A) [APP-023]; any other interference would be temporary only. Environmental impacts from the compound have been assessed and mitigation would be provided in accordance with measures set out in the OEMP [REP6-011]. The Travelodge is next to residential properties and all the mitigation for those will also benefit the Travelodge. Whilst the precise details of the physical impacts arising from the implementation will be available in due course, in principle the interference will be limited. Construction impacts are constrained by residential properties, and as there will only be daytime working, the site will be managed in a way which will have limited impact on Travelodge’s operations. The existing A303 would also remain open during the construction of the Scheme.</p>
22.1.6	<p>The Draft DCO identifies that new rights are required for the installation, use, protection and maintenance of, and access to, statutory undertaker’s apparatus. We understand there is a proposed water pipe and electricity cable to be diverted through Travelodge’s land. Again no details have been provided as to how and when this will occur and the business can, once more, not prepare and plan for these works. The apparatus will affect a large area of parking used for overnight guests staying at the hotel. In addition it is an area used as dedicated HGV parking to avoid congestion elsewhere on the site.</p>	<p>The Applicant’s written summary of matters put at the Compulsory Acquisition Hearing held on 9th and 10th July 2019 [REP5-002], section 8.1, page 2.25-2.26, explains that:</p> <p>Mr Richard Turney (on behalf of the Applicant) referred to Land Plan Sheet 9 of 15 [APP-005] and explained that Travelodge were tenants of the plot in question. The nature of the interest being sought by way of compulsory acquisition is limited to the permanent acquisition of rights over the land parcel for the purpose as described in the draft DCO (at Schedule 4) [REP4-018] and in the Statement of Reasons (at Annex A) [APP-023]; any other</p>

	<p>Will this area be out of action during the works? If so how does the Promoting Authority intend to replace it? The loss of this car parking area without replacement will be detrimental to the use and enjoyment of the site.</p>	<p>interference would be temporary only. At the current design stage, exact details are not known and many of the items raised are in relation to that point; however, item MW-COM1 in the Outline Environmental Management Plan [REP6-012] will require the appointed contractor to liaise with landowners, occupiers and agents in relation to construction works and access and any losses arising in consequence of any interference with parking facilities on the Travelodge site would be dealt with under the compensation code. In the final Scheme arrangement, Travelodge will have the same access to site as they do now.</p>
22.1.7	<p>The comments above also apply to the proposed construction of the Countess Roundabout Flyover where there is likely to be significant noise generating activities. Again there are no proposals shown in the Environmental Statement or other documents forming part of the applicant's submission showing other airborne noise, dust and fumes will be mitigated during the construction period.</p>	<p>This written representation was included in [REP2-144] and was previously responded to at deadline 3 in Highways England Comments on Written Representations [REP3-013], as detailed below.</p> <p>As part of the EIA process, an Outline Environmental Management Plan (OEMP) (a revised version of which is submitted at deadline 6 [REP6-011]) has been prepared that sets out general and topic-specific principles and requirements for the control, mitigation and monitoring of potential construction impacts, including stipulating the use of low noise and low vibration construction methods and dust management and suppression techniques for minimising impacts on receptors. This includes receptors in the vicinity of works for the Countess flyover but not limited to, Countess Farm and Travelodge (see PW-NOI1, PW-NOI3, PW-NOI4, PW-NOI5, PW-NOI6, MW-NOI1, MW-NOI3, MW-NOI4, MW-NOI5, MW-NOI6, and D-NOI4, and PW-AIR1, MW-AIR1, MW-AIR2, and MW-AIR4 in the OEMP). Highways England's appointed contractor will be required to develop, in consultation with Wiltshire Council, and implement a detailed Construction Environmental Management Plan (CEMP) based on and incorporating the relevant requirements of the OEMP. The OEMP's control, mitigation and monitoring requirements (including in relation to the use/operation of construction compounds) have underpinned the assessments of effects for all environmental topics presented in the Environmental Statement. The OEMP will be secured under paragraph 4 of schedule 2 of the draft development consent order [REP6-005].</p>

22.1.8	<p>Also the new A303 will be on an elevated section in this location on a free flowing section. The current arrangement is an at grade road which is controlled by the Countess Roundabout and traffic lights. There is a serious concern regarding operational noise from vehicles using the new elevated carriageway which will be on the same level as hotel bedroom windows. There are no proposals for noise barriers or other mitigating measures which may help to counter the increase in operational noise.</p>	<p>This written representation was included in REP2-144 and was previously responded to at deadline 3 in Highways England Comments on Written Representations [REP3-013], as detailed below.</p> <p>At Countess Flyover, the Scheme design includes provision for 1.8m absorptive noise barriers. The requirement to provide the noise barriers is set out in D-NOI2 of the Outline Environmental Management Plan (OEMP) (a revised version of which was submitted at deadline 6 [REP6-011]). Compliance with the OEMP is secured under paragraph 4 of schedule 2 of the draft development consent order [REP6-005]. With the noise barriers on the flyover in place, and other operational traffic noise mitigation measures, such as the use of a thin surfacing system which results in lower levels of noise generation than a standard hot rolled asphalt surface, the magnitude of the worst case increase in traffic noise levels at the Travelodge is classed as minor. This is confirmed in general terms in Chapter 9, paragraph 9.9.40 of the Environmental Statement [APP-047].</p>
22.1.9	<p>We are not aware of surveys or studies have taken place on the site and therefore it is difficult to conceive how the applicant has had any regard to the impact the proposed scheme will have on the enjoyment and use of Travelodge's site.</p>	<p>The Applicant's written summary of oral submissions made at the Compulsory Acquisition Hearings held on the 9th and 10th July 2019, submitted at deadline 5 [REP5-002] at section 8.1 on pages 2-26 to 2-27 explains that:</p> <p>The interference with Travelodge's land interests is limited; and the extent of land required from Travelodge is also limited. Permanent acquisition of rights is required in respect of the utility diversions in this location.</p> <p>Mr Graham Martin on behalf of Highways England noted that the permanent acquisition relates to power and water routes. The route for power apparatus, which requires permanent rights, and therefore sets this land as blue, is not a known route at this time, but will be required to traverse plot 09-12.</p> <p>The appropriate surveys have been carried out to assess the impact of the proposed Scheme. Such surveys were carried out in the local area and did not require access directly onto Travelodge's land. Further surveys will be required as part of the detailed design process, and these may require access to Travelodge's land in due course.</p>

22.2	Responses to the ExA's Second Round of Written Questions	
	Matter Raised	Highways England's Response
22.2.1	<p>It is proposed to acquire permanent rights over the entirety of Plot 09-14 both for utility diversion works and access to the works compound. We understand there is an alternative means of access to the works compound (plot 09-12) via Ratfyn Farm (see plots 09-41, 09-38, 09-27, 09-26, 09-25 and 09/24) which powers are also being sought after. Why is the Promoting Authority seeking two alternative accesses to the same land? The imposition of the permanent rights over 09-14 will have a detrimental effect on Travelodge's enjoyment and use of their land and their tenants.</p> <p>It is possible to exercise temporary powers to facilitate a means of access for a temporary compound. Once the compound has been restored and returned to the landowner clearly there is no need for any access right. In terms of the utility connection again this can be installed under temporary powers and then a deed of grant entered into between the landowner and the statutory undertaker.</p>	<p>The Applicant's written summary of oral submissions made at the Compulsory Acquisition Hearing held on the 9th and 10th July 2019, [REP5-002] at section 4.2 explains:</p> <p>"... that there was a distinction to be drawn, as the need for the land has been justified in the Statement of Reasons [APP-023] on a plot by plot basis both in terms of the need for the land itself and for the extent of the land required. There has been engagement with landowners on those issues and the extent of land is shown in the Land Plans [APP-005], and in terms of the way in which that aligns with the justification, there has been a plot by plot analysis of the need for and extent of the land required and we have justified and explained the need for each plot (those explanations being set out in the Statement of Reasons). ... the overarching point is that Highways England will only take land that it actually needs for the Scheme. In response to Mr Eves' point, if Highways England can achieve the same outcome without using powers of outright compulsory acquisition, for instance by 'stepping down' from this to the acquisition of rights only, then this is what Highways England will do in that scenario."</p> <p>The Statement of Reasons (SoR) [APP-023], paragraph 5.3.12 also provides an explanation of the need to acquire rights over land plots for diverting statutory undertakers' apparatus:</p> <p>"Provision has been made in the DCO application for the creation and acquisition of new rights to accommodate the diversion of statutory undertakers' apparatus over a number of plots (as identified in Schedule 4 to the Draft DCO). Whilst these rights are shown as applying to the whole of the relevant plots, following the completion of the detailed design by the contractor the final areas required for the works to deliver the diversions will be reduced to apply only to defined corridors. These corridors are generally expected to be between 6 and 12m wide, other than for the oil pipeline, to</p>

		<p>which a 50m wide exclusion zone applies, and consideration will be given to combining corridors for statutory undertakers' apparatus where practicable. The power to acquire rights would then only be implemented by the Applicant in respect of the land in the corridors so identified; it would not be implemented over the entirety of the plots in question. At this stage, however, as explained above, it is not practicable to determine the exact locations of the required corridors and hence powers are sought on the basis explained above."</p> <p>Highways England needs permanent rights as the utility diversion works would be permanent, so there would need to be permanent rights of access to maintain the diverted utilities. This is explained in the SoR, table 2, for plot 09-14 as follows:</p> <p>New rights required for the installation, use, protection and maintenance of, and access to, statutory undertakers' apparatus (for the benefit of the relevant statutory undertaker and for the Applicant).</p> <p>The Applicant is currently engaged in discussions with electricity service providers regarding the potential routes for the supply of power to the Scheme. Those discussions have been ongoing since the preparation of the Application and as yet, the route for the required power supply has yet to be definitively confirmed. Confirmation of the route is expected in due course, as is explained in the Applicant's responses to Second Written Questions CA.2.22 and CA.2.56 [REP6-026]. In this context, the Application includes the flexibility necessary to accommodate potential alternative options; however, as explained above and in previous submissions, the Applicant will only exercise powers of (compulsory) acquisition over the land required for, or to facilitate, or as is incidental to, the Scheme, once such land has been identified. In the meantime, in order to safeguard the future deliverability of the Scheme, the Applicant seeks powers to use and acquire land on the basis set out in the Application.</p>
22.2.2	It has not been demonstrated or justified why utilities need to pass through our client's land and what alternatives have been explored. There appears to be other land in the vicinity of Plot 09-14 which is	The Planning Act 2008 does not require applicants to justify alternatives on a plot by plot basis for utility diversions. Consideration of alternatives is required in terms of alternatives for the proposed Scheme, which the Applicant has

	not occupied by commercial users which could be used for utility diversions	<p>undertaken in detail, during the pre-application phases, as explained in the Applicant's Written Summaries of Oral Submissions made at the Compulsory Acquisition Hearing held on 9 and 10 July 2019 [REP5-002] at page 2-7.</p> <p>The utilities routes shown in the Environmental Statement Figure 2.7 [APP-061] are indicative only. Discussions are currently ongoing with utilities suppliers regarding preferred alignments in the vicinity of the Travelodge. This includes alternatives which do not pass through Travelodge's land. The preferred alignments shall be developed by the utilities suppliers in consultation with the main works contractor, therefore, at this stage, it cannot be confirmed whether, or the extent to which, Travelodge's land will be affected by these works. However, where feasible, during detailed design, all efforts will be made to avoid adverse impacts on commercial properties.</p>
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23 Ministry of Defence (REP6-057)

23.1	Comments on draft DCO submitted at Deadline 6	
	Matter Raised	Highways England's Response
23.1.1	<p>It is noted that information regarding plant equipment required to complete the works is not yet available. The sections of the A303 lying under the approach for runway 17 at Boscombe Down are subject to the most onerous aerodrome height safeguarding requirements affecting the scheme (Development falls within zones indicated on Safeguarding plans to require consultation where development is within the following categories all development; development exceeding 10.7m in height and development exceeding 15.2m in height). Therefore, it is requested that DIO Safeguarding are added to any list of consultees whose approval would be required when detailed design is assessed through any relevant Requirements.</p> <p>Regarding bird strike safeguarding the main concern of the MOD relates to the creation of new habitats and open water bodies which may attract and support populations of large, and, or flocking birds close to the aerodrome.</p> <p>The central and western parts of the scheme contain sizeable drainage management features. These appear to attenuation ponds. At this stage details on the design and management of these are not available. It is therefore difficult to determine whether they will provide a significant attractant to hazardous birds. It is again requested that DIO Safeguarding are added to any list of consultees whose approval would be required when detailed design is assessed through any relevant Requirements.</p> <p>In summary, DIO Safeguarding have no objection to the development in principle on the basis that we are consulted at the detailed design stage for works compounds, plant equipment and landscaping including attenuation ponds.</p>	<p>The Applicant has arranged to meet the MoD to discuss these matters on 4 September 2019. Prior to that, however, the Applicant intends to amend the existing liaison provisions within MW-G31 of the OEMP [REP6-O11] in the next iteration so it reads:</p> <p>The main works contractor shall consult with the MoD to ensure that the construction design and plant (including the use of plant) and detailed design of the drainage for the Scheme do not lead to interference with MOD's operations or the safe operation of Boscombe Down Airfield.</p>

24 Natural England (REP6-062)

24.1	Response to ExAs Second Round of Written Questions	
	Matter Raised	Highways England's Response
24.1.1	<p>[In response to Ec.2.1]</p> <p>RSPB The landowners of Normanton Down reserve have stated that they would not agree to the erection of enhanced fencing to deter trespass and to manage the risk of increased visitor pressures in the southern part of the World Heritage Site (i.e. south of the existing A303) impacting adversely on the breeding success of protected species such as the stone curlew.</p> <p>iii. Please explain how this could be addressed, and what other measures could be put in place; and how such measures would be secured. Highways England are, as we understand it, pursuing alternative mitigation options so that no reliance is needed on these measures.</p> <p>iv. In the absence of such agreement in respect of enhanced fencing, what are the consequences in terms of any assumptions made in the HRA and ES that this solution would be successfully delivered.</p> <p>See response above.</p>	<p>Highways England welcomes the response from Natural England and is in agreement. As stated within Ec.2.1 and Ec.2.3 of the Responses to the ExA's Written Questions - Biodiversity [REP6-024], Highways England has committed to providing two additional new stone curlew plots, in addition to the two previously committed to. Further consultation is currently being undertaken with both the RSPB and Natural England, along with landowners (where applicable).</p>
24.1.2	<p>[In response to Ec.2.3]</p> <p>v. 4.1 to 4.3 of the SoCG with RSPB refer to ongoing discussions around mitigation delivery and monitoring in respect of stone curlew, including "in the unlikely event that the need for additional plots is triggered by unsuccessful mitigation" [REP2-017].</p>	<p>Highways England welcomes the response from Natural England and is in agreement. As stated within Ec.2.1 and Ec.2.3 of the Responses to the ExA's Written Questions - Biodiversity [REP6-024], Highways England has committed to providing two additional new stone curlew plots, in addition to the two previously committed to. Further consultation is currently being</p>

	<p>vi. Noting that these matters may be considered in the HRA technical note being prepared, can the Applicant, RSPB and Natural England comment in particular on how the need for additional plots would be triggered and how they would be delivered.</p> <p>Natural England understands that Highways England is considering committing to delivering additional plots irrespective of impact sufficient to mitigate a worst case scenario. If this is pursued, the issue of triggering can be sidestepped. Highways England are better placed to advise on delivery. However, subject to suitable commitments from Highways England, we see no particular reason why this mitigation cannot be treated as being certain to be effective (in HRA terms) both in terms of delivery certainty and certainty of ecological efficacy once delivered.</p> <p>vii. iii. In particular, the ExA is concerned about being satisfied 'beyond reasonable scientific doubt' whilst uncertainty remains (as demonstrated by the phrase "in the unlikely event that") and the acknowledgement that further mitigation might be necessary (where the proposed mitigation proves "unsuccessful") to address potential effects of the Proposed Development.</p> <p>As per our response above, our understanding is that Highways England is considering committing to delivering additional plots irrespective of impact, sufficient to mitigate a worst case scenario. If pursued, then irrespective of the success of on-site mitigation measures at Normanton Down, offsite mitigation will be sufficient to mitigate worst case impacts.</p>	<p>undertaken with both the RSPB and Natural England, along with landowners (where applicable).</p>
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25 The Turner Family (REP6-067)

25.1	Responses to the ExA's Second Written Questions	
	Matter Raised	Highways England's Response
25.1.1	<p>[In response to CA.2.48]</p> <p>The areas of land take in places are both excessive and poorly designed by Highways England which will have significant adverse long-term implications for the Turner family. These design flaws will also unnecessarily increase the compensation burden on HE. The following amendments are therefore requested:</p> <ol style="list-style-type: none"> 1. Settlement Ponds (SP) <ul style="list-style-type: none"> • SP 1 to the east of the B3083 has been deleted from the scheme but the red line remains in the original position. As a result, the area of land take on the south side of the new road is excessive and prevents the use of invaluable grazing land near the main farm buildings. The red line also prevents the Turner family from making a minor planning change to the curtilage of Foredown House as part of proposed building alterations to screen the new road. The red line should be moved north to match the area required for landscape reprofiling. • SP2 should be relocated west towards the B3083 and redesigned to be narrower in shape to reduce the area of land take. This would eliminate an unworkable pocket of agricultural land on the west side of the pond. • SP3 should be moved north to be as close to the carriageway as possible. The proposed location of the maintenance access track from the south results in unnecessary land take and creates an unworkable field area to the west side of the pond. Changing the 	<p>Highways England was asked to respond regarding the Turner Family's concerns in the ExA's second written questions on Compulsory Acquisition and Temporary Possession. Highways England's response is in [REP6-026], at Written Question CA 2.49.</p> <p>To reiterate, in response to these specific points, Highways England stated:</p> <p>1. Settlement Ponds</p> <p>Further justification for the degree of flexibility sought and the extent of the land in the ownership of the Turner family which is required for the purpose of providing a construction compound and settlement ponds was provided by the Applicant in oral submissions made at the Compulsory Acquisition Hearing held on 9 and 10 July 2019, written summaries of which were also supported by a technical note, appended to the summary submitted at deadline 5 [REP5-002, see Agenda Item 8.1]. The issue is addressed in the excerpt below, which explains the Applicant's position in relation to its need for flexibility and for the extent of the land in question:</p> <p>"A Contractor was appointed to provide advice during the preparation of the application documents and on the likely requirements of the construction works and this advice was used as the basis for the sizing of the compounds. Regarding the infiltration ponds, these were discussed at the ISH hearing and they have been designed to manage flow from specific catchments. Highways England's view, therefore, is that a robust approach has been taken in regard to these works facilities.</p> <p>"Mr David Bullock on behalf of Highways England responded to the further question of the shape of the ponds, which was determined through the drainage strategy and in relation to which the dDCO allows further</p>

	<p>route of the track so it runs east/west parallel with the new road carriageway with access gained from Green Bridge 2 whilst being slightly longer, would avoid another access point onto the old A303 and eliminate the unworkable field area to the west of the pond.</p> <ul style="list-style-type: none"> SP5 increases land take and sterilises productive farmland unnecessarily. A better location is further east, closer to the roundabout, thereby minimising land take and the unnecessary spread of road infrastructure. It is admitted by HE that a conservative ground infiltration rate has been used, resulting in oversized ponds being specified in the design. It is requested that more representative ground infiltration data is used to minimise the land take of all the settlement ponds. <p>2. A360 north of Longbarrow Junction</p> <ul style="list-style-type: none"> There is excessive land take to the north-east side of the new dumbbell roundabout. The CPO boundary should align with the highway boundary on the south side of the realigned A360. The land take on the west side of the A360 to the north of Kighton Farm Track heading north to the Stonehenge Visitor Centre roundabout is excessive and should align with the new highway boundary. The proposed compound areas to the north side of the new A303 and realigned A360 are excessive and should be reduced in size. <p>3. Compound adjoining the B3083</p> <ul style="list-style-type: none"> The proposed compound to the east side of the B3083 should be relocated to the west side of the B3083 onto land that is subject to landscape reprofiling. <p>4. Landscape reprofiling area to the north of Green Bridge 2</p> <p>The area of land take significantly exceeds the proposed landscape reprofiling area and should be reduced in size to match this area.</p>	<p>reiteration through detailed design (at the moment the Scheme is still at the preliminary design stage).</p> <p>“... Highways England will only take what land it actually needs for the Scheme on completion of the detailed design.</p> <p>Mr Steve McQuade confirmed that the drainage ponds have been shaped to be integrated into the landscape and to create a natural form to blend into the landscape.”</p> <p>Further details regarding settlement ponds can be found in the Applicant’s Comments on Written Representations [REP3-013] responses to comments set out in paragraphs 43.1.10, 43.1.12 and 43.7.1.</p> <p>As the settlement pond which was originally proposed to be located within the southern part of Plot 04-04 (close to Foredown House) is no longer considered to be required for the purposes of the Scheme, this will help the Applicant to reduce its requirement for the temporary possession of land within Plot 04-04, which will enable the Turner family to make its proposed planning application for alterations to buildings within the curtilage of its property.</p> <p>2. A360 north of Longbarrow Junction</p> <p>The highway design alignment included in the application ties in to the existing carriageway which has substandard geometry for the required design speed. As such the stopping sight distance is not achieved, affecting visibility to the existing farm access. This approach requires a departure from standard to be approved by Highways England’s Safety and Engineering Standards department. This section of the A360 is one of the primary access routes to the Stonehenge Visitor Centre and if the departure was not approved the tie in point would need to be moved, resulting in an additional length of cutting and requiring more land within the area defined as Plot 14-02.</p> <p>The Highways England response to the Turner family’s Written Representation [REP3-013] at paragraph 43.1.21 also explains:</p> <p>TD9/93 of the Design Manual for Roads and Bridges (DMRB) Volume 6, Section 1, Part 1, provides minimum requirements for Stopping Sight Distance (SSD). The A360 links to Longbarrow junction are in cutting to</p>
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minimise its visual impact on the adjacent World Heritage Site. Therefore, to comply with design standards, the proposed red line boundary between Kighton Track and the Stonehenge Visitor centre and highway verges are required to be widened to provide adequate forward visibility.

The land identified for compulsory acquisition for the link between the new Longbarrow roundabout and A360 has been based on the application design. The contractor requires a degree of flexibility to determine the exact alignment of the highway through detailed design. Highways England will only take what land it actually needs for the Scheme on completion of the detailed design.

3. Compounds adjoining the B3083 and to the north of new A303

The locations of the compounds are described and shown in Section 2.4.12 to 2.4.16 of the ES [APP-040] and in Figure 2.7 [APP-061] and are outside of the WHS, close to access routes and of a size sufficient to incorporate the facilities likely to be required by the contractor. The contractor will need a degree of flexibility to determine the specific layout of the compound and to allow enough space for the requisite works to take place. With regard to the impacts associated with construction compounds, these are addressed in the OEMP [REP4-021], in the form of measures referred to in MW-G28 (Main Construction Compound); Pollution Control is addressed in MW-WAT7, Flood Risk in MW-WAT13, Hazardous Materials in MW-G20, and Noise in MW-NOI3.

4. Landscape reprofiling area to the north of Green Bridge No. 2

The Highways England response to the Turner family's Written Representation [REP3-013] at paragraph 43.1.22 explains:

As is explained in the Statement of Reasons [APP-023], in paragraph 5.3.4, Highways England considers that the Land included in the DCO is the minimum land-take required to construct, operate, maintain and mitigate the Scheme and is therefore necessary to achieve the objectives of the Scheme. Highways England has sought to achieve a balance between minimising land take and securing sufficient land to ensure delivery of the Scheme, noting that the detailed design of the Scheme has yet to be developed. In that context, the limits of the land have been drawn as tightly as possible so as to avoid unnecessary land take. In the event that less

		land proves to be required in a particular area following the detailed design stage, Highways England would only seek to acquire that part of the land that is required and, in all events, will seek to minimise effects on landowners.
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26 Winterbourne Stoke Parish Council (REP6-071)

26.1	Winterbourne Stoke Parish Council responses to the ExA's Second Written Questions	
	Matter Raised	Highways England's Response
26.1.1	<p>[In response to De.2.2]</p> <p>Clearly in a scheme of this international importance, a single, imaginative and cohesive design vision is essential.</p>	<p>Please refer to the Applicant's responses to the Examining Authority's Second Written Questions De 2.1 and De.2.2 [REP6-023] which set-out how the Outline Environmental Management Plan (OEMP) submitted at deadline 6 [REP6-011] has been updated to include an integrated design vision for the Scheme.</p>
26.1.2	<p>[In response to De.2.3]</p> <p>All of these issues are of major local importance and those directly affected by virtue of their land ownership and regular and repeated access to the areas in question should be consulted.</p>	<p>Please refer to the Applicant's response to the Examining Authority's Second Written Question De.2.3 [REP6-023] which outlines the process for consultation with stakeholders on fencing and safety measures at the cutting. In addition to the measures discussed in that response, the Applicant notes that measure MW-COM3 of the OEMP [REP6-011] requires liaison with landowners, occupiers and agents, as appropriate, to establish fencing requirements both during and after construction.</p>
26.1.3	<p>[In response to De.2.4]</p> <p>Consultation is desirable as we believe the Applicant has grossly understated the visual and auditory impacts of the scheme and has not introduced sufficient mitigation measures from the outset. The models used to defend the Applicant's position are unvalidated and as such, unfit for purpose, whether or not they are "industry standard".</p>	<p>Please refer to the Applicant's response to the Examining Authority's Second Written Question De.2.4 [REP6-023] which outlines the consultation requirements for the River Till Viaduct, Countess Flyover and Green Bridges.</p> <p>Please also refer to the Applicant's response at deadline 3 to Winterbourne Stoke Parish Council's and Dr Shuttleworth's Written Representation [Section 6.5 of REP3-013]. This response outlines the Applicant's position regarding the suitability of the traffic noise modelling methodology, in particular in terms of it being prescribed by the National Policy Statement for National Networks (NPSNN) and the Design Manual for Roads and Bridges (DMRB). This response also outlines the traffic noise mitigation measures incorporated into the design of the Scheme including the bypass of Winterbourne Stoke village, the use of false cuttings on the new alignment north of the village, and a solid</p>

		<p>parapet on the south side of the River Till viaduct. With these measures in place a reduction in traffic noise levels during operation of the scheme is predicted at all residential properties in the noise modelling study area in Winterbourne Stoke, with the exception of Foredown House on the northern edge of the village.</p> <p>Further detail on the suitability of all the modelling used to assess the impacts of the Scheme was provided at deadline 5 [Section 5.1 REP5-003].</p> <p>With regard to the visual impacts, the landscape and visual impact assessment [APP-045] has identified a series of representative visual receptors within and around Winterbourne Stoke (visual receptors 07B, 08, 08A, 08B, 08C, 08D and 09) and assessed the potential impacts to these during the construction phase, year 1 of operation and year 15 of operation phases of the Scheme [APP-228: Schedule of Visual Effects]. The receptors are predicted to experience significant adverse visual effects during the construction phase and also at year of 1 of operation, with the exception of receptor 08D as the properties on the north side of the A303 would screen the majority of the Scheme. At year 15, the number of significant adverse visual effects would reduce as a result of the establishment of the proposed planting, although significant adverse visual effects would remain for recreational users of PRow WST 04, which extends northwards from Winterbourne Stoke, as a result of the River Till viaduct. Therefore, the Applicant respectfully states that the visual impacts have not been grossly understated.</p>
26.1.4	<p>[In response to De.2.6]</p> <p>The Applicant's use of "illustrative" drawings" has been a major concern of our parishioners from the outset. We believe that little reliance can, or should, be placed upon them unless they can be shown to accurately reflect reality.</p>	<p>The Applicant respectfully notes that the approach taken for the submission of plans and drawings is appropriate and that the Works Plans [APP-008] establish the point of reference for the lateral limits of deviation. Any reference to "illustrative" drawings does not negate that they are based on reality, it merely reflects the industry standard approach to developing significant highways projects, by which the Applicant requires a proportionate degree of flexibility, within the limits of deviation which delimit the parameters of the environmental assessment, to develop the detailed design of the Scheme. It is imperative that the consent has sufficient flexibility built in to ensure that the Scheme can be implemented, to deliver value for money while still ensuring the high level of mitigation required. Further detail can be</p>

		<p>found in the Applicant's response to the Examining Authority's Second Written Question De.2.6 [REP6-023].</p> <p>Furthermore, the Applicant has committed to a detailed list of design commitments, design principles and established a procedure for stakeholder consultation on the detailed design of the Scheme, all under an overarching design vision of the Scheme in the updated draft Outline Environmental Management Plan [REP6-011] submitted at deadline 6.</p>
26.1.5	<p>[In response to LV.2.4 & Ns.2.2]</p> <p>We are not aware of any measures that have been adopted by the Applicant to assess the tranquility of the western end of the scheme as it is now and as it might be post construction. This is a critical shortcoming on a scheme that impacts on a rural area.</p>	<p>The tranquillity assessment is reported in Chapter 7 of the Environmental Statement Landscape and Visual Impact Assessment [APP-045]. Paragraphs 7.9.51-7.9.52 report the outcome of the assessment at the western end of the Scheme, which covers Winterbourne Stoke, stating:</p> <p>“There would be an adverse impact to the tranquillity within the Scheme boundary between the western end of the Scheme and the western part of the WHS. This is due to the dual carriageway, the River Till Viaduct and the increased scale of Longbarrow Junction in comparison to the existing roundabout and A303.</p> <p>The exception to this adverse impact in tranquillity would be at Winterbourne Stoke, where there would be a beneficial impact, due to the removal of the A303 and the visual and audible reduction in vehicles from within the village.”</p> <p>On this basis Highways England respectfully do not agree that an assessment of impacts on tranquillity at the western end of the Scheme has not been completed.</p>

27 Environment Agency (REP6-046, REP6-047, REP6-048)

27.1	Responses to the ExA's second round of written questions	
	Matter Raised	Highways England's Response
27.1.1	<p>[In response to Ag.2.1]</p> <p>i. The Groundwater Risk Assessment (ES Appx 11.4, July 2018) recognised four abstraction points (Well Points 1 – 4) related to the lapsed licence that was in the process of being re-applied for during preparation of the Environmental Statement. Well Point 5 was not on the lapsed licence but added when re-issued in June 2018 hence it was not included in data sent to the applicant by the EA prior to this date as the understanding was that the licence would be re-applied for under the same terms as the lapsed licence.</p> <p>The numerical modelling carried out to date and reported in ES Appendix 11.4 Annex 1 Numerical Model Report (July 2018) has assessed impacts on groundwater levels due to the presence of the proposed tunnel (and assuming no de-watering during construction) at Well Points 1-4 and these are deemed to be negligible with respect to seasonal fluctuations (maximum impact of 8cm rise at the nearest well to the tunnel (Well Point 1) under high groundwater level conditions. No fall in level was predicted at any of the Well Points 1-4 as a result of the tunnel under any situation.</p> <p>The model predicts no change in groundwater level under any situation at Well Point 4 which is the nearest to Well Point 5 and slightly closer to the tunnel. It is therefore not anticipated that specific assessment of groundwater level changes at Well Point 5 would identify any impact due to the proposed tunnel</p>	<p>i) The Applicant agrees with the Environment Agency that whilst Well Point 5 has not been specifically assessed, assessment of impacts at Well Point 4 provides a conservative assessment of impacts at Well Point 5 since it is closer to the proposed scheme and that no impacts are predicted at Well Point 5.</p> <p>From a water quality perspective, the Applicant agrees with the Environment Agency that detailed design of the drainage scheme is ongoing and approval will be secured by Requirement 10 of the DCO following consultation with the Environment Agency.</p> <p>ii) The Groundwater Management Plan proposed at item MWWAT10 of the OEMP [REP6-011] provides for further risk assessment and monitoring and is secured pursuant to requirement 4 of the DCO. The detail of monitoring will be discussed with Wiltshire Council and the Environment Agency as part of the Groundwater Management Plan.</p> <p>iii) The Applicant confirms that all licensed abstraction points will be included in future risk assessments.</p>

	<p>In summary, whilst Well Point 5 has not been specifically assessed, we consider that assessment of impacts at Well Point 4 provides a conservative assessment of impacts at Well Point 5 since it is closer to the proposed scheme.</p> <p>The impact of construction and operation of the tunnel on surface and groundwater interests, including the above abstractions should be re-assessed if there are any changes to the design or construction methodology put forward by the contractor. The EA should be consulted on this and agreement sought to ensure any impacts are suitably mitigated.</p> <p>From a water quality perspective, Well Point 5 is the most southerly of the Manor Farm abstraction points, situated immediately to the south of the existing A303. Since the new road will bypass Winterbourne Stoke to the north, Well Point 5 will be further from the works than Well Point 4 which was identified in the Groundwater Risk Assessment although no assessment of impacts on specific receptors was reported.</p> <p>We understand that detailed design of the drainage scheme is ongoing and approval will be secured by Requirement 10 of the DCO following consultation with the Environment Agency. We will expect the proposal to demonstrate that water quality will not be adversely impacted at existing abstraction points, including those operated by the Turner family as well as the wider aquifer.</p> <p>ii. Despite the omission of Well Point 5 in the Groundwater Risk Assessment, it is further from the proposed scheme than other points on the licence which were identified and assessed for impacts on groundwater level due to the proposed tunnel. We consider further assessment of risk to groundwater quality from discharges of road drainage across the whole scheme are required once the detailed drainage strategy is finalised and this should consider all existing water rights, including the points identified on the Turner family licence.</p> <p>iii. All abstraction points on the active Turner family abstraction licence should be included as potential receptors in the</p>	
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	Groundwater Management Plan (as required by the OEMP) and the requirement for ongoing monitoring and/or mitigation identified by the plan once the final scheme design and construction methods have been confirmed.	
27.1.2	<p>[In response to De.2.1]</p> <p>The EA have no comments to make on signing and lighting. However, we consider this chapter title should be widened if it is to include activities outside of the WHS. In addition, if the purpose of the Stakeholder Consultation Group (SCG) includes being consulted on the detailed design of the scheme, then we consider the EA should be included in the list of stakeholders who form the SCG.</p>	<p>Refer to the Applicant's response to Written Question De.2.1 [REP6-023] which outlines the revisions to Chapter 4 made within the OEMP submitted at deadline 6 [REP6-011].</p> <p>The SDCG is being consulted on the external appearance only of certain elements of Scheme design. As such, it is not considered appropriate for The Environment Agency to be included within the SDCG as their function does not relate to the visual impacts of the Scheme. The Environment Agency will be consulted on aspects of the Scheme relevant to their function e.g. the Flood Risk and Groundwater Management Plans defined respectively within items MW-WAT12 and MW-WAT10 of the OEMP [REP6-011].</p>
27.1.3	<p>[In response to De.2.4]</p> <p>As we believe the River Till viaduct would be outside of the WHS, then yes this this should be included, along with any other relevant activities outside of the WHS.</p> <p>Consultation with the EA in terms of flood risk needs to occur with any part of the development which is within 8 metres of a main river and/or within the flood plain. As our flood risk permitting is included within this DCO, we will certainly need to be consulted on the River Till crossing (both temporary and permanent).</p>	<p>Refer to the Applicant's response to Written Question De.2.4 [REP6-023] which outlines consultation requirements for the River Till Viaduct.</p> <p>As stated within item MW-WAT12 of the OEMP [REP6-011], the main works contractor shall prepare a flood risk management plan (in consultation with the EA) which includes:</p> <p><i>b) any applications made, or likely to be made, pursuant to the Environment Agency's protective provisions in the DCO, where required in relation to flood defence, for temporary and permanent works and the status of the works;</i></p> <p><i>d) any flood risk management or mitigation measures implemented, or to be implemented, in support of temporary and permanent works proposals;</i></p> <p>The Environment Agency will therefore be consulted on flood risk across the Scheme, including in relation to flood risk to and from the proposed River Till viaduct.</p>
27.1.4	<p>[In response to DCO.2.15]</p> <p>We maintain our position that any deviation from the specific vertical alignment used to represent the tunnel in the numerical groundwater</p>	<p>The Applicant understands that the Environment Agency is content that its concern is addressed by MW-WAT10 of the OEMP, compliance with which is secured by requirement 4.</p>

	<p>model (Fig. 3.9 of Environmental Statement Appendix 11.4 Annex 1: Numerical Model Report (AMW, July 2019)) or design or construction methodology proposed will require this modelling to be repeated to ensure it will not lead to greater impacts. This is because the representation of the tunnel in the model was based on the specific groundwater levels and tunnel elevations as shown in the figure.</p> <p>As suggested by the Applicant in their written summary of oral submissions put at the DCO hearing on 4 June 2019 [REP4-029], we agree that assessment of the final detailed design, including any further numerical modelling as referred to above should be included in the Groundwater Management Plan as required by MW-WAT10 of the OEMP.</p>	
27.1.5	<p>[In response to DCO.2.20]</p> <p>The latest draft DCO dated June 2019 has not incorporated our recommended amendments to Article 13. We therefore wish to repeat our recommendation provided in our previous representations and at the groundwater hearing which state:</p> <p>We recommend that this article be amended to include groundwater and dissolved pollutants in the text. This is required because groundwater is a sensitive resource in the vicinity of the A303 Amesbury to Berwick Down site and requires particular protection. Here is our recommended amended wording:</p> <p>“Discharge of water (5) The undertaker must take such steps as are reasonably practicable to secure that any water discharged into a watercourse or public sewer or drain or to the ground under this article is as free as may be practicable from gravel, soil or other solid substance, oil or matter in suspension or dissolved pollutants. “</p> <p>This amendment is in line with the draft DCO recently discussed at the A303 Sparkford to Ilchester DCO Examination in Somerset. Please see Part 4 (Supplemental Powers) Article 20 Discharge of water of the A303 Sparkford to Ilchester DCO.</p>	<p>Please see the Applicant's response to this suggested drafting in its deadline 4 submission [REP4-036] at reference 12.2.2 and item 31 of the Applicant's 'Comments on any further information requested by the ExA and received to deadline 4 and 5' submitted at deadline 6 [REP6-035] and the Applicant's response to Written Question DCO.2.19 [REP6-027].</p>

27.1.6 [In response to DCO.2.34]

We do not consider that the Secretary of State is suitably qualified to determine whether any deviations from the plan will lead to materially new or materially adverse impacts on the environment. We consider that such assessment falls within the expertise and remit of the Environment Agency and would request that we are consulted in the same way that Requirement 3 specifies consultation with the planning authority (Wiltshire Council) on matters related to its functions.

Due to the highly sensitive nature of groundwater and surface water resources in the vicinity of the scheme from both quantity and quality perspectives we should be consulted on any changes to the proposed design of the scheme and if any construction dewatering is deemed to be required since the assumption to date has been that no dewatering will take place.

We consider that the Environment Agency should be consulted by the Secretary of State when he or she is considering whether to approve a departure from the plans. This is because the project crosses two river corridors (River Avon and River Till) which are SAC's and because ground water is a very sensitive resource in the area and requires particular protection. As such we would recommend that the Environment Agency must be consulted on any departure from the plans and no development should take place until the Environment Agency has confirmed that all apparent environmental risks associated with the departure from the plans have been considered and mitigated.

The Environment Agency does not consider that Requirement 4 is sufficient to allay concerns of not being consulted under Requirement 3 above.

The Applicant disagrees with the Environment Agency's view that the Secretary of State does not possess the necessary expertise to make a judgement on whether a proposal that is incompatible with the works plans and engineering section drawings would give rise to materially new or materially different environmental effects from those assessed in the Environmental Statement.

The Secretary of State for Transport has existing functions under the aegis of the Highways Act 1980, the Transport and Works Act 1992 and the Harbours Act 1964 for undertaking EIA screening and scoping, decisions which would be of a similar nature to that envisaged by requirement 3, and for otherwise complying with the EIA Directive in taking decisions. The same general principle applies to determinations under the Planning Act 2008, where the SoS is ultimately responsible for determining whether or not to grant development consent.

In respect of dewatering, the Applicant has already committed to the use of a closed face tunnel boring machine (D-CH32 of the OEMP submitted at deadline 6) [REP6-011], which minimises the need for dewatering. The Applicant further observes that the second limb of the Environment Agency's proposal, that no development can take place until it has confirmed that all environmental risks have been considered and mitigated is not justified, because it is unnecessary and disproportionate. The environmental risks to the water environment as a result of the scheme have been assessed in the ES as Chapter 11 (alongside Appendix 11.6) of the ES concludes that impact to groundwater quantity and quality from the Scheme is low or negligible and therefore not significant, based on the embedded mitigation set out in the Road Drainage Strategy and the OEMP. Any change under Requirement 3 would need to show that it does not produce any materially worse or new environmental effects from those assessed in the ES. If it did, it could not be approved by the Secretary of State. The Secretary of State is accustomed to assessing these matters, as set out above. Therefore, the consideration and mitigation of environmental risks is already catered for in the existing terms of the Requirement requiring the Secretary of State's approval. To require the Environment Agency's approval of these matters would be duplicative and therefore unnecessary.

		<p>The Applicant has previously acknowledged that, in the light of any particular change, it may be appropriate for the Secretary of State to seek the views of other persons and has amended requirement 3 to make this clear. It should also be noted that requirement 3 requires consultation with Wiltshire Council in any event, who would be well positioned to consult more widely should it consider it to be appropriate.</p> <p>The Applicant considers its approach to be sensible and proportionate.</p>
27.1.7	<p>[In response to DCO.2.43]</p> <p>We note that dDCO Requirement 4 requires adherence with the OEMP. The requirement itself does not mention consultation, however the OEMP does.</p> <p>OEMP submitted at DL3 has since been updated and re-submitted at DL4.</p> <p>We are satisfied that the OEMP (submitted at DL4) includes consultation with the Environment Agency on preparation of CEMPs (PW-G1, MW-G5), revision of the CEMPs (MW-G6), preparation of management plans including Groundwater Management Plan and Water Management Plan (MW-G7) and preparation of the Handover Environmental Management Plan (MW-G11). However we consider the OEMP and dDCO Requirement 4 should state that the applicant should “consult with Environment Agency to ensure all environmental risks have been adequately assessed and that suitable mitigation measures are proposed and implemented to offset any impacts predicted”.</p> <p>For all but the HEMP (MW-G11), the OEMP requires the contractor to submit a summary report of the consultation to the Authority including reasons should consultee’s comments not be reflected in the submission. We request that this clause also be added to MW-G11 to ensure that any disagreement between the contractor and consultees is highlighted to the Authority before they determine any approval.</p>	<p>The next iteration of the OEMP will be updated to provide for provision of a consultation report to the Authority in respect of the HEMP.</p> <p>The requested amendment to the OEMP and the DCO has not been made because it is not necessary, nor is it appropriate in all circumstances. These are already clearly the matters that the EA is expected to input on, given its statutory purpose and duties; there is no need to state them in the requirement or the OEMP. Moreover, not every decision taken in relation to environmental impacts results in offsetting of all impacts, which would be the effect of the requested wording; and there are already legal obligations under the EIA regime to assess likely significant effects and where necessary provide suitable mitigation and in the background environmental legislation to avoid pollution and take the necessary steps to protect the environment. All of these matters would clearly have to be considered by the contractor in the production of the various documents for consultation with the EA, in addition to the many detailed requirements regarding environmental protection contained in the OEMP.</p>

27.1.8	<p>[In response to DCO.2.57]</p> <p>The amended Requirement 7 in the draft DCO submitted at DL4 is satisfactory for dealing with previously unidentified contamination that may be found during construction.</p> <p>However, there still does not appear to be any requirement for the applicant or their contractors to assess and if necessary remediate potential contamination that was identified in the Environmental Statement. We consider therefore that a more proactive approach should be taken to the management of contamination where it may be reasonably expected and it is not sufficient to wait until it is uncovered during construction before action is taken to assess and remediate it. This will help to ensure that any land contamination is appropriately managed and help to reduce the risk of land contamination identified during construction delaying construction works.</p>	<p>The Applicant is considering amendments to the OEMP to provide clarity that the contractor will appropriately deal with contamination identified in the ES as part of its detailed design of the scheme.</p> <p>This will be incorporated in the next iteration of the OEMP.</p>
27.1.9	<p>[In response to DCO.2.64]</p> <p>We are satisfied that this Requirement will ensure our views are communicated to the Authority prior to it making decisions on discharge of Requirements. However as detailed above, we consider the OEMP and dDCO Requirement 4 should state that the applicant should “consult with Environment Agency to ensure all environmental risks have been adequately assessed and that suitable mitigation measures are proposed to be put in place to offset any impacts predicted.”</p>	<p>The Applicant welcomes the Environment Agency's confirmation that it is content with the drafting of requirement 11.</p> <p>The Applicant has concerns with the Environment Agency's suggested amendment to requirement 4 to require consultation on all environmental risks and mitigation measures.</p> <p>The OEMP secures the majority of the mitigation identified in the Environmental Statement (other requirements address other matters). The Applicant has worked carefully with stakeholders to develop the OEMP and to align the relevant measures specified therein, with consultation with the relevant bodies that have an interest or expertise in the measure concerned. The blanket provision suggested would undermine this careful approach and would introduce uncertainty and ambiguity by giving rise to a conflict between the clear provisions of the OEMP and the proposed blanket amendment.</p>
27.1.10	<p>[In response to DCO.2.68]</p> <p>As discussed in our previous written representations, we would recommend that a Requirement be included in the draft DCO relating to the need for an Environmental Enhancement Plan to be produced</p>	<p>Please see Highways England's response to Written Question DCO.2.67 [REP6-027] which sets out why it is considered that a requirement (or OEMP provision) securing an environmental enhancement plan is not justified in policy terms. Further enhancement/restoration opportunities, such as those</p>

and submitted by the applicant. Alternatively we would be satisfied for the production of the plan to be included in the OEMP or HEMP. This could be included in the list of plans in OEMP reference MW-G7 and then the implementation/maintenance aspects covered in the HEMP as required.

In terms of the contributions to improvements to waterbodies that could potentially be achieved as a result of the scheme, we can provide some specific examples, which are discussed below. These waterbodies have been impacted by previous road constructions and would benefit from being improved through the latest A303 Stonehenge road scheme.

The Countess Channel and Bowles Hatches example provided below was submitted for the Environment Designation funding bid for 2019/20 but has currently been deferred. We understand the applicant may be relying on the Environment Designated Funds to address our concerns that the A303 Stonehenge scheme is lacking in environmental enhancement relating to the water environment. However, to date we do not have agreement for any proposals in the River Avon or River Till catchments relating to the Highways England Environment Designated funds. We therefore seek more certainty in delivering environmental enhancements that are required in these catchments, which we believe could be achieved in the production and implementation of an Environmental Enhancement Plan as part of the dDCO.

Countess Channel and Bowles Hatches are located on the River Avon on the northern edge of Amesbury, very close to the proposed A303 Stonehenge road scheme. Please see the attached map (Map 1). These reaches of the Upper Avon are part of the River Avon Restoration Plan. The reaches are part of SSSI unit 4 which is in unfavourable condition for inappropriate water levels, inappropriate modification of the channel form, physical processes and siltation.

The river has been modified repeatedly through history and now has a rather complex layout. The key structures here are a weir which feeds flow toward the Countess channel, Bowles Hatches, three modern road bridges and one historic (disused) road bridge. The

identified, fall outside of the scope of the Scheme (and indeed the Order limits) and therefore the DCO – the rationale set out in Highways England's response applies to the specific examples provided and remains valid. As stated, it should be noted that necessarily the opportunities for enhancement pursued arose from the land that will be required for the Scheme and the specific examples of enhancements provided fall outside that land.

The proposed requirement does not comply with the test for requirements in paragraph 4.9 of the NNNPS. The subject matter of the requirement is not necessary because the Applicant's application conforms to the relevant policy requirements. No certainty of delivery of the enhancements proposed is required to make the Scheme acceptable in policy terms. As previously submitted, through national Designated Funds Highways England is supporting a range of environmental initiatives where these contribute to meeting the fund's objectives, nationally or regionally. As previously noted, Highways England is willing to confirm its commitment to continuing pursuit of those initiatives and will discuss this further with the EA. However, that process and that funding is entirely independent of this Scheme – this is key.

historic alignment of the River Avon can be inferred from examining LiDAR topographic data in conjunction with historic mapping dating back to 1879. It appears that a “double dog leg” bend upstream was removed when the A303 was built, in the 1960s. This presumably allowed the bridge to be built in the dry, on slightly higher ground, and the river was then diverted to flow under the bridge in a new excavation.

The original channel remained downstream of the bridge and its upper end now forms the highway toe drain. Fish passage is currently impeded by Bowles hatches and the Countess weir.

The primary restoration objectives for this reach are to remove the restriction to fish passage caused by the weir and the hatches and to improve the physical condition and habitat of the river channels. This will help towards improving the target condition, which is currently ‘unfavourable’, of the SSSI/SAC.

The preferred option for this reach is to regrade the channel around the weir and reinstate the majority of the flow in the Countess channel, while leaving enough flow along the hatches feeder to maintain a healthy watercourse. This will create a more sustainable river system by reinstating a naturally functioning river channel which would adapt naturally to flood flows. This would improve drainage and preventing silt build up behind structures and within drainage channels, which potentially could impact the road network.

This project will help natural sediment transport along the river whilst also benefiting the designated species and habitats currently not present along this reach of the River Avon.

In 2014 the Environment Agency undertook appraisal, consultation (with landowners and fishing clubs) and drew up outline designs for this work; however, this project has not been progressed due to the complexity of the site and resources pressures within the programme. There is currently no secured funding for this work but our delivery partners are keen to progress this project if resources are available to do so. Highways England will be a key partner in this project due to the close vicinity of the A303 and their road drainage

networks. This project was submitted for the Environment Designation funding bid for 2019/20 but has currently been deferred.

The Countess Channel and Bowles Hatches proposals, as well as others in the River Avon and River Till catchments that are currently less worked up, would contribute to restoration of the rivers Avon and Till (both SAC and in unfavourable condition) which the A303 currently crosses and additional crossing proposed. We can provide more detail on the river restoration proposals if required.

There is no commitment within the current A303 Stonehenge road scheme to directly enhance the area nor take advantage of existing partnership opportunities that may contribute to overall net gain and achieve multiple benefits.

Multiple benefits could be achieved by contributing to climate change resilience, potential air quality/noise benefits from any increased (wet) woodland, wellbeing and recreational benefits from angling and other public opportunities, not least alongside species and habitat improvements from improved morphology.

This would commit Highways England to explore and utilise the opportunities within the Hampshire Avon Catchment Partnership to deliver the River Avon Restoration Plan and its associated multiple benefits.

Local and National policies

There are government aspirations for river restoration, net gain, partnership working and multiple benefits. These include: Making Space for Nature, Biodiversity 2020: A Green Future: 25 Year Environment Plan; National Planning Policy Framework (NPPF); SW River Basin Management Plan; and the River Avon Salmon Action Plan.

In particular we would reference the recent Biodiversity Net Gain good practice guidance as published by CIEEM and CIRIA (and 2019 government consultation), promoting:

- Being inclusive, equitable, sharing benefits amongst stakeholders;

	<ul style="list-style-type: none"> • Being additional to achieve conservation outcomes that demonstrably exceed existing obligations; • Optimise sustainability and the wider environmental benefits for a sustainable society and economy. <p>On a more local level the River Avon Restoration Plan sets out the aims for the River Avon catchment.</p> <p>We consider it would be reasonable and necessary to secure this within the dDCO for the reasons outlined above. In particular to fulfil the aims of the River Avon Restoration Plan; to maximise the water environment opportunities in the vicinity of the A303 road scheme; and to ensure the scheme satisfies the requirements of national and local policy.</p>	
27.1.11	<p>[In response to Fg.2.2]</p> <p>Prevention of pollution</p> <ol style="list-style-type: none"> Discharges to ground or surface water from the construction phase would be subject to the Environmental Permitting Regulations 2016 and may require an environmental permit. The Environment Agency should be contacted at the earliest opportunity and/or reference to the Environmental Permits pages of the GOV.uk website once the details of any discharges are known, to allow determination of whether a permit will be required. If a permit is issued it will be the responsibility of the applicant to ensure their discharge does not cause flooding or pollution. Any such requirement may be conditioned. Since these discharges are covered by existing legislation we do not consider it necessary to address explicitly in the OEMP. <p>Flood Risk</p> <p>The construction method at present does not appear to require any dewatering. It is essential that any changes to the detailed design are adequately risk assessed. The EA should be consulted on any updated design and risk assessment and agreement reached with the EA regarding conclusions and any mitigation measures</p>	<p>Please refer to the response provided to the Examining Authority's Written Questions submitted at deadline 6 [REP6-028, Question Fg.2.2 and Fg 2.33].</p> <p>MW-GEO8 of the OEMP [REP6-011], confirms the measures required to prevent cross contamination from stockpiled materials, and to protect buried services, drainage runs and groundwater source protection zones from potential ingress of contaminants. MW-GEO6 requires contractors to control potential hazardous substances in line with COSHH guidance; MW-WAT4 requires a spill response procedure and pollution incident control plan; MW-WAT6 requires the contractor to establish measures to prevent deposition of silt or other material in any watercourse, lake or aquifer, in accordance within industry guidelines; and MW-WAT7 requires contractors to carry out handling of contaminated material treatment processes and storage that does not affect the chalk aquifer.</p> <p>MW-WAT3 of the Outline Environmental Management Plan (OEMP) requires the main works contractor to utilise sustainable methods for construction waste water discharges, including site drainage, surface runoff, and dewatering discharges including waste water generated through the dewatering of the tunnel arisings. This includes discharge to watercourses or groundwater subject to water quality and rate of discharges and scour assessments (for surface watercourses only) in accordance with the</p>

	<p>proposed. No works should commence until written agreement that these plans provide appropriate measures and mitigation to protect the site and surrounding area from flood risk during construction and operation of the scheme.</p>	<p>provisions of the draft Development Consent Order (dDCO). Discharges will be controlled through the EA's permitting process (see also MW-WAT8).</p> <p>The EA will also be consulted on the flood risk management plan and water management plan required by the OEMP, which will deal with the finalised and detailed construction methodology to be used.</p>
27.1.12	<p>[In response to Fg.2.3]</p> <p>We agree Wiltshire Council should be consulted as well as the EA. We believe this should apply to the entirety of MW-WAT3.</p>	<p>Item MW-WAT3 in the OEMP [REP6-011] was updated at deadline 6 to reference Wiltshire Council as being consulted in agreeing variations to runoff rates. This is considered to be appropriate in the context of Wiltshire Council's statutory duties. References to the EA in the rest of this item relate to the EA's statutory functions.</p>
27.1.13	<p>[In response to Fg.2.6]</p> <p>Yes we agree that the Flood Risk Management Plan should be listed in MW-G7 of the OEMP and that the plan should be developed in consultation with both Wiltshire Council and the Environment Agency.</p>	<p>These changes were made to the OEMP [REP6-011] at deadline 6.</p>
27.1.14	<p>[In response to Fg.2.8]</p> <p>Further discussions with the applicant with regards to the road drainage ponds has suggested they may be able to be removed from the 1%AEP plus appropriate allowance for climate change flood extent, which will remove the impact it has on the flood plain by displacing flood water.</p> <p>As part of our strategic overview role we support Wiltshire Council with the upper allowance (40% for surface water) being applied to the road drainage design. This is due to the consequences of the testing of this allowance on the proposed design and the freeboard being used up. An alternative option for HE is to demonstrate that no increase in flood risk is caused by not designing the road drainage to the 40% allowance.</p> <p>UKCP18 projections relating to peak rainfall intensity and peak river flow are due to be released in 2019. This may result in the</p>	<p>See Applicant's response to Fg.2.8 [REP6-028] at deadline 6 and the updates made to OEMP items WAT12 and WAT13 at that deadline [REP6-011].</p>

	<p>allowances for surface water and rivers changing and requiring reflection within this application.</p> <p>With regard to MW-WAT12 of the OEMP, we have agreed some wording that addresses our comments made in relation to climate change allowances. We believe this wording is to be included in the next version of the OEMP.</p>	
27.1.15	<p>[In response to Fg.2.14]</p> <p>We have previously requested that retention of contaminated runoff resulting from a pollution incident in the tunnel be controlled automatically to reduce the risk that time delays in manual operation of the necessary valves will allow contaminated water to be distributed to the wider drainage network and potentially released to the environment.</p> <p>Whilst there is a risk of failure of such an automated system, we would expect the design to incorporate appropriate backup measures and fail safes to guard against inadvertent release of contaminated runoff and manual operation of the system.</p> <p>We understand that detailed design of the drainage system is ongoing and therefore we do not have sufficient information to estimate how far contaminated water may be distributed through the wider system in the event of delays in operation of manual overrides following an incident.</p> <p>We request that an automated method of control is specified in the OEMP in order to reduce the risk of pollution of the sensitive water environment in the vicinity of the scheme should there be delays in physical attendance of emergency services following an incident in the tunnel.</p>	See Applicant's response to Fg.2.14 [REP6-028].
27.1.16	<p>[In response to Fg.2.15]</p> <p>We are awaiting consultation on the detailed design of the drainage system for the scheme, in which we expect details of the impounding sump along with capacity of the wider system to contain and deal</p>	See Applicant's response to Fg.2.15 [REP6-028]. Also note that the DCO was amended at deadline 6 to specifically include impounding sumps within Schedule 1 [REP6-005].

	<p>with contaminated runoff. Approval of the drainage strategy is secured by Requirement 10 of the DCO.</p> <p>Provided the overall scheme has sufficient ability to prevent discharge of contaminated runoff and pollution of the environment we do not consider it necessary to stipulate in the DCO that a specific impounding sump be used since other arrangements may provide equivalent levels of environmental protection.</p>	
27.1.17	<p>[In response to Fg.2.17]</p> <p>We welcome that Requirement 10 requires the consultation and written agreement with the Environment Agency during detailed design of the drainage system.</p> <p>Wiltshire Council's comments are related to ensuring the details of the drainage scheme conform to certain flood risk criteria. The only suggestion we have relating to groundwater and contaminated land issues is a request that "automated control of the tunnel drainage" is specified in MW-WAT14. As stated in FG.2.14 above, we would support the stipulation in the OEMP for automated tunnel drainage control.</p> <p>Surface water needs to be managed appropriately to ensure flood risk is not caused or increased on or off the site. We would defer to the Lead Local Flood Authority on their reasons as to why the additions are required. A timetable for implementation is an important condition to ensure that mitigation is in place to ensure excess runoff is able to be mitigated for when it is produced.</p>	<p>Refer to the Applicants response to Fg.2.17 [REP6-028]:</p> <p><i>The Applicant considers that Requirement 10 adequately secures control of the Scheme's drainage design and the Council's requirements could be considered through the approval and consultation process as required; meaning no OEMP amendment is required.</i></p> <p>This would include consideration of the controls of the tunnel drainage.</p>
27.1.18	<p>[In response to Fg.2.18]</p> <p>Due to the sensitivity of the water environment within the scheme - groundwater designated as principal aquifer with potable and agricultural use abstractions and SAC designated surface watercourses – it must be ensured that these resources are protected. Protection of controlled waters falls within the Environment Agency's remit and we therefore consider it appropriate that we have</p>	<p>Please see the Applicant's response to Written Question Fg.2.18 [REP6-028] for further details. As noted in the response, requirement 10 requires consultation with the Environment Agency and Wiltshire Council in respect of the final drainage design, before the details are approved by the Secretary of State. As a consultee, the Environment Agency will be able to have meaningful influence over the final drainage design for the Scheme. This approach is in line with the precedents for Highways England DCOs. Where the Scheme's drainage system interacts with a 'drainage work' that is the responsibility of the Environment Agency, the Environment Agency will have</p>

	<p>meaningful influence over the standards of environmental protection incorporated into the scheme.</p> <p>Whilst we welcome the inclusion in Requirement 10 for consultation with the Environment Agency over the final detailed drainage design and the mechanism for our opinion to be conveyed to the Secretary of State in summary form secured by Requirement 11, we consider that a specific requirement for our agreement with the proposed scheme will ensure that the most appropriate body assesses the adequacy of environmental protection measures.</p>	<p>the relevant approval rights pursuant to the protective provisions agreed in the DCO.</p>
27.1.19	<p>[In response to Fg.2.19]</p> <p>REP2-009 – ES Appendix 11.3 – Road Drainage Strategy (May 2019) (Clean) REP2-010 – ES Appendix 11.3 – Road Drainage Strategy (May 2019) (Tracked)</p> <p>The Drainage Strategy submitted to date contains only a preliminary design and lacks details that we require to be satisfied that the risk of pollution from the scheme is acceptable.</p> <p>The details we require, and have previously requested, include the capacity of the system to contain reasonably expected volumes of contaminated runoff and the risk posed to groundwater quality in the aquifer generally and at abstractions by discharges from infiltration basins.</p> <p>We consider that the HEWRAT risk assessments presented to date at the application stage are suitable for high level risk screening, but more detailed assessments of the infiltration basins is required to demonstrate that the discharges will not pose a risk of pollution to the underlying aquifer or have adverse impact on existing abstractions. These assessments should follow targeted site investigation of the proposed basin locations and incorporate site derived values for parameters including infiltration rates and depth to groundwater.</p> <p>No justification has been provided to date that demonstrates that the requirements of HD45 will provide sufficient protection to controlled</p>	<p>The specific details are a matter for detailed design which the EA will be able to consider pursuant to Requirement 10 of the draft DCO in relation to both HEWRAT and flood risk issues (noting also the provisions of MW-WAT13, which provides for mitigation to be provided where there is development in the 1%AEP + Climate change allowance zone). The illustrative design has taken account of the guidelines given in the DMRB such as HA 103/06, Selection of Vegetated Drainage Systems, which states</p> <p><i>4.20 When selecting drainage systems to reduce the risk of pollution to downstream watercourses, the risk of accidental spillage must also be considered. A method is given in Annex I of HA 216 (DMRB 11.3.10) for estimating the probability of pollution occurring from a major spillage event. The need for spillage containment and control facilities should be determined in accordance with the guidance given in HA 216 (DMRB 11.3.10) and after consultation with the EPA. Systems should be designed and adapted to include these measures and should usually include a method to control the discharge of any spillage at the outfall, regardless of whether designated containment provision is made. Means of control should be simple to find, readily accessible from the highway and capable of being operated easily and quickly by the emergency services. Details of signs to be used to locate control devices are given in HD 33 (DMRB 4.2).</i></p> <p>Therefore, penstocks are proposed within the drainage network, to isolate and contain any spillage within the sealed highway drainage system prior to the DTAs.</p>

	<p>waters and that measures in excess of these, as allowed for by HD33/16 paragraph 2.1, are not required.</p> <p>With regard to flood risk issues, the only concern the EA have remaining is the location of the drainage ponds which are currently within the 1%AEP plus appropriate allowance for Climate change flood extent which causes a displacement of fluvial flood water. However, we consider this can be addressed at the detailed stage, along with consultation between Wiltshire Council and Highways England. We would recommend any component built to ensure flood risk safety of the development for its lifetime to be maintained by the applicant.</p>	
27.1.20	<p>[In response to Fg.2.20]</p> <p>We consider this to be a Lead Local Flood Authority responsibility. Maintenance should therefore be agreed between Wiltshire Council and Highways England. We would recommend any component built to ensure flood risk safety of the development for its lifetime to be maintained by the applicant.</p>	<p>Maintenance responsibilities will be able to be agreed pursuant to Requirement 10 of the dDCO (noting that initial proposals are set out in the Road Drainage Strategy [REP2-009] and the protective provisions for Wiltshire Council's benefit as LLFA within the dDCO, which are close to being agreed.</p>
27.1.21	<p>[In response to Fg.2.21]</p> <p>We have not received any risk assessment to demonstrate the level of treatment provided by the proposed drainage treatment areas. We therefore do not have confidence at this stage that the proposed method of treatment will be sufficient for protecting groundwater quality. Any proprietary attenuation substance that may be installed will be limited in the chemicals that it can remove. This will typically be hydrocarbons. Any spill of other chemicals such as pesticides, herbicides etc are unlikely to be treated by such substances. This is the basis for the Environment Agency requesting the drainage design should allow for storage of chemical spill and run-off volume from rainfall event so that any such spill can be isolated before it is discharged/soaks away and where appropriate tankered away to an appropriate treatment works. The EA should therefore be consulted in the drainage design and agree that any mitigation and attenuation proposed will be sufficient to protect the water environment.</p>	<p>The Road Drainage Strategy [REP2-009] Section 2.2.1 sets out the preliminary drainage design technical standards, the development of the design set out in that document has had regard to the Design Manual for Roads and Bridges Volume 4, Section 2, HA103/06 Vegetative Treatment Systems for Highway Runoff.</p> <p>Highways England notes that a risk assessment of the preliminary design was carried out, which indicated that it was acceptable for water quality purposes (Annex 1 to ES Appendix 11.1 [APP-279]). The Environment Agency will be consulted on the final drainage design pursuant to Requirement 10 of the dDCO; and where relevant will approve aspects of the drainage system that fall under the auspices of its protective provisions. See also response to 27.1.19 above.</p>

	Both Drinking Water Standards and Freshwater Environmental Quality Standards are appropriate in this scheme since groundwater supplies both potable abstractions and baseflow to the Rivers Till and Avon.	
27.1.22	<p>[In response to Fg.2.22]</p> <p>The requirement for post construction monitoring is to allow any observable impacts from the scheme to be detected and if necessary, mitigation measures implemented. For this to be effective, monitoring should cover periods of high and low groundwater level and specification of a fixed duration may not achieve this. We consider that the detailed requirements for monitoring be set out in the Groundwater Management Plan (MW-WAT10) and carried forward into the HEMP following completion of construction works.</p> <p>Wiltshire Council have responsibility for groundwater flooding and should therefore be consulted and provide agreement on the Groundwater Management Plan in addition to the Environment Agency.</p> <p>The details of monitoring will depend in part on the final scheme design and construction methods. It is therefore likely that any scheme detailed now would be subject to amendment following granting of the DCO. We consider that MW- WAT10 of the OEMP secures the requirement for the Groundwater Management Plan to include a groundwater level and water quality monitoring and reporting programme. This plan should be updated and amended as necessary prior to incorporation into the HEMP on completion of construction works to ensure the necessary ongoing monitoring is secured.</p> <p>Groundwater monitoring is in the interest of landowners in the area owing to the reliance on groundwater supplies.</p>	<p>Please refer to the response provided to the Examining Authority's Written Questions submitted at deadline 6 [REP6-028, Question Fg.2.22].</p> <p>The detail of monitoring will be discussed with Wiltshire Council and the Environment Agency when developing the Groundwater Management Plan (MW-WAT10 in the OEMP) [REP6-011].</p> <p>The updated version of the OEMP submitted at deadline 6 was updated to provide for consultation with Wiltshire Council as appropriate to their statutory functions.</p>

27.1.23	<p>[In response to Fg.2.26]</p> <p>Yes, we consider that there should be a requirement to consult the Environment Agency should there be any change to the proposed design of the tunnel from the specific design assessed in the Groundwater Risk Assessment. This is because a change to the design could lead to greater impedance of groundwater flow and corresponding increase of groundwater levels to the north and fall to the south of the tunnel. Depending on the magnitude of these level changes significant impacts to abstractions and/or baseflow to rivers could result. We consider that evaluation of any assessment of such impacts falls within the remit of the Environment Agency.</p> <p>Requirement 3 specifies consultation with Wiltshire Council (the planning authority) on matters within their remit and we would expect similar consultation on matters within the Environment Agency's remit by additional wording in Requirement 3. We would also recommend that the applicant should seek agreement that the environmental risks associated with the scheme have been adequately risk assessed and suitable mitigation proposed.</p>	<p>Please refer to the response provided to the Examining Authority's Written Questions submitted at deadline 6 [REP6-028, Question Fg.2.26].</p> <p>In summary, measure MW-WAT10 of the OEMP [REP6-011] requires the production of a Groundwater Management Plan to include, amongst other matters:</p> <p><i>"b) An update to the Groundwater Risk Assessment for the final design and construction Plan.</i></p> <p><i>c) The groundwater level and water quality monitoring and reporting programme.</i></p> <p><i>d) Development of baseline groundwater conditions and derivation trigger levels and action levels/mitigation/action plans for exceedances and accidents/incidents."</i></p> <p>The OEMP requires the Environment Agency to be consulted on the Groundwater Management Plan. MW-WAT10 would apply whether or not the Applicant also sought the Secretary of State's approval under requirement 3. The Environment Agency's concerns are, in the Applicant's view, appropriately addressed by the OEMP.</p>
27.1.24	<p>[In response to Fg.2.28]</p> <p>We have previously requested inclusion of a pre-commencement requirement in the DCO to undertake investigation and risk assessment of potentially contaminated land along the route alignment, particularly the former military sites.</p> <p>Potential contamination was identified in the desk study reported in the Environmental Statement and we consider that where contamination may reasonably be expected to exist, risks should be investigated prior to works commencing rather than relying on a less controlled discovery and greater potential for mobilising contamination if found during the main construction works.</p> <p>We request that an additional Requirement is included in the DCO to secure assessment and if necessary, remediation of contamination.</p>	<p>Please refer to the response provided to the Examining Authority's Written Questions submitted at deadline 6 [REP6-028, Question Fg.2.28].</p>

27.1.25	<p>[In response to Fg.2.29]</p> <p>Whether it would be necessary to cease all works in an area if contaminated land is found would depend on the nature of works being carried out, nature and extent of any contamination identified and remediation approach that may be proposed. It may be possible for certain types of non-intrusive works to continue whilst the investigation and assessment is carried out without increasing the risks of mobilisation of the contamination.</p> <p>In the interests of expediency for the contractor we do not consider that a blanket approach requiring all works to cease in every case is appropriate. We would expect the CEMP to identify the process that will be followed in reporting, investigating and remediating any contamination. This will include detailing circumstances when works should cease.</p>	<p>Please refer to the response provided to the Examining Authority's Written Questions submitted at deadline 6 [REP6-028, Question Fg.2.28, point i) paragraphs 2, 3 and 4 and Question Fg 2.29].</p> <p>The process that will be followed in the unlikely event that contaminated land is discovered is set out in Requirement 7 of the draft DCO submitted at deadline 6 [REP6-005] and in the OEMP [REP6-011]. Requirement 7 of the draft DCO submitted at deadline 6 [REP6-005] makes appropriate provision for a risk-based approach that includes reporting as soon as reasonably practicable to the Environment Agency (EA) and Wiltshire Council (WC); preparation of a contamination risk assessment in consultation with them; if remediation is necessary the preparation of a written scheme and programme of remediation in consultation with the EA and WC for approval of the Secretary of State. Measures to manage residual risks arising from previously unidentified contaminated land included in the OEMP are PW-GEO2 and MW-GEO2 which provide measures to first assess and, if required, manage/treat unexpected contamination in compliance with CLR11. Measure MW-GEO2 also includes the requirement to inform WC in the event of the discovery of contamination.</p> <p>The circumstances when works could cease would be when potentially significant contamination which is simulated to present a risk following risk assessment and would be agreed during consultation with the EA and WC.</p>
27.1.26	<p>[In response to Fg.2.32]</p> <p>We consider that existing controls are adequate for managing the risks from construction at this stage of the scheme.</p> <p>However, we will expect detailed assessment of the effects of the construction method chosen following detailed design including the degree of invasion of drilling fluids and grouts, risk to groundwater quality from these and the long term impact on groundwater levels and flows caused by additional impedance beyond the designed cross-section of the tunnel.</p>	<p>Please refer to the response provided to the Examining Authority's Written Questions submitted at deadline 6 [REP6-028, Question Fg.2.32].</p> <p>The Applicant agrees with the Environment Agency that the controls set out in the OEMP are adequate and notes also the Environment Agency's protective provisions in the DCO.</p>

	We expect this assessment to be delivered within the Groundwater Management Plan (MW-WAT10) and as part of the approval process for ground treatments (MW-WAT9).	
27.1.27	<p>[In response to Fg.2.33]</p> <p>We do not consider that there has been any assessment of dewatering in relation to this scheme to date.</p> <p>The impacts of dewatering would depend on many factors including the location of abstraction and discharge and whether other control measures are implemented. The severity of impact would therefore vary if a certain rate of dewatering was implemented at different locations.</p> <p>We therefore do not consider it appropriate to attempt to set a maximum rate of dewatering. Rather, the impacts of any proposed dewatering should be assessed by the contractor based on the specific details of the operation.</p> <p>As detailed above, any change in design or construction method should be further risk assessed and the Environment Agency consulted to ensure the risk to the environment has been suitably assessed and agreement should be sought that any mitigation is sufficient to offset any impacts on the water environment.</p> <p>Under the Water Resources Act 1991, a licence is required from the Environment Agency if dewatering is proposed at rates greater than 20 m³/day. We will expect any application to be accompanied by a detailed assessment of impacts. Early dialogue with the Environment Agency over any proposed dewatering is advised to reduce the potential for delays.</p> <p>It should be noted that the Environment Agency will not grant a licence for dewatering or any other abstraction if it cannot be demonstrated that the impacts are acceptable. By the applicant requiring EA approval for any risk assessment and mitigation through planning we should not get into a situation where planning is</p>	<p>Please refer to the response provided to the Examining Authority's Written Questions submitted at deadline 6 [REP6-028, Question Fg.2.33].</p> <p>The Applicant considers that the approval/permitting procedures set out in the OEMP and secured by requirement 4 of the draft DCO are sufficient to ensure any required dewatering is adequately controlled and able to be considered by the Environment Agency.</p>

	approved but the applicant cannot obtain a permit to undertake such activities.	
27.1.28	<p>[In response to Fg.2.34]</p> <p>There has so far been no assessment of dewatering relating to this scheme.</p> <p>Should dewatering be required, the licensing regime will ensure that dewatering is only allowed where it has been demonstrated by the applicant or their contractor that the impacts of the proposed operation are acceptable. In this case, we would expect the evidence for this to be provided within the Groundwater Management Plan and CEMPs prior to any licence application.</p>	<p>Please refer to the response provided to the Examining Authority's Written Questions submitted at deadline 6 [REP6-028, Question Fg.2.33].</p> <p>The Applicant considers that the approval/permitting procedures set out in the OEMP and secured by requirement 4 of the draft DCO are sufficient to ensure any required dewatering is adequately controlled.</p>
27.1.29	<p>[In response to Fg.2.37]</p> <p>The Environment Agency should be consulted on Soil Management Plan to consider the wider environmental impact of soil management on water resources and water quality. Land contamination issues may however be considered through CL:AIRE Definition of Waste Code of Practice and as such the relevant Qualified Person, appointed by the contractor will make a declaration on the suitability of the Materials Management Plan from the perspective of contamination.</p> <p>Since soils will largely be re-used for agricultural production, we would recommend that an appropriate body should also be consulted on the proposals to ensure suitability of any restoration of agricultural land – such as Natural England Catchment Sensitive Farming, the NFU or landowner(s).</p>	<p>The OEMP [REP6-011] includes a number of provisions to facilitate landowner involvement in the management of soils.</p> <p>At deadline 6 the OEMP was amended at MW-MAT2 to provide that the MMP should incorporate an earthworks method statement covering the excavation, on-site movement, placement and compaction of excavated material (see MW-GEO7 also). The EA are to be consulted on the Materials Management Plan, so if it considers that more information is required in relation to the management of soils, it can ask for such information at the time of considering the Materials Management Plan.</p> <p>Regarding including The Environment Agency as a consultee during the production of the Soils Management Strategy, The Applicant is considering its position on this point. If agreed, the proposed amendment shall be made to the next iteration of the OEMP.</p>
27.1.30	<p>[In response to Fg.2.42]</p> <p>We would recommend that Historic England are also consulted on any monitoring data pertaining to archaeological sites including Blick Mead.</p>	<p>Please refer to the response provided to the Examining Authority's Written Questions submitted at deadline 6 [REP6-028, Question Fg.2.42 and Fg 2.46].</p> <p>In the unlikely event that groundwater levels are affected at Blick Mead, in accordance with standard practice during any necessary consultation on the</p>

	<p>Where any monitoring data or assessment indicates any impact at Blick Mead or other archaeological site dependent on saturation, we recommend that Historic England are consulted and their guidance sought.</p> <p>[In response to Fg.2.47]</p> <p>If any further risk assessment identifies potential impacts at Blick Mead, we would expect that Historic England are consulted to provide expert advice on the significance of the impacts in relation to the objects of archaeological interest.</p>	<p>Groundwater Management Plan, the Environment Agency would engage with other statutory bodies as necessary to ensure that heritage assets are taken fully into account.</p> <p>Please refer to the response provided to the Examining Authority's Written Questions submitted at deadline 6 [REP6-028, Question Fg.2.46].</p> <p>In accordance with standard practice during any necessary consultation on the Groundwater Management Plan the Environment Agency would engage with other statutory bodies as necessary to ensure that heritage impacts are taken fully into account.</p>
27.1.31	<p>[In response to Fg.2.48]</p> <p>The groundwater risk assessment completed to date suggests that there is unlikely to be any significant fall in groundwater level in the chalk aquifer beneath the Blick Mead site as a result of the proposed tunnel. There is the possibility that the deposits receive a certain degree of wetting from superficial deposits above in addition to water from the chalk below and this recharge is unlikely to be affected by the proposed tunnel.</p> <p>Should the tunnel design or proposed method of construction change to such a degree as to lead to impacts in chalk groundwater level at Blick Mead, any contribution from the superficial deposits above would continue.</p> <p>If subsequent risk assessment suggests impacts on groundwater level in the chalk are likely to extend to the site then further investigation of the relevant importance of wetting from the chalk or superficial deposits would allow better assessment of overall magnitude of impacts on wetting of the deposits of interest.</p> <p>Preservation of archaeological remains is the remit of Historic England who are the authors of guidance on carrying out the Tiered Assessment. We therefore defer to their judgement on the adequacy of the assessment completed to date.</p>	<p>Please refer to the response provided to the Examining Authority's Written Questions submitted at deadline 6 [REP6-028, Question Fg.2.48].</p> <p>During the ISH on flood risk and groundwater matters [REP4-032], it was confirmed that Highways England has followed the required guidance from Historic England in the production of the Blick Mead assessment, Historic England further confirmed this at the hearing, noting also that the assessment conducted was adequate.</p> <p>Consideration of the final detailed design effects at Blick Mead will be possible as part of the Environment Agency's consideration of the Groundwater Management Plan.</p>

27.1.32	<p>[In response to Ns.2.4]</p> <p>i. Yes the terminology for non-impact piling has now been agreed. We understand this to be non-percussive piling. We are therefore satisfied with the wording in the latest version of the OEMP (June 2019).</p> <p>We have not reviewed all of the application documents to confirm whether this is consistently used throughout. However, we would require that any piling in or near to watercourses should use the same principle of non-impact piling.</p>	<p>See the Applicant's response to Second Written Question Ns.2.4 [REP6-031]. The commitment to non-impact piling at the River Till is set out in the Outline Environmental Management Plan (OEMP) [REP6-011] under MW-BIO3. D-BIO1 provides that the locations of the piers and foundations of the River Till viaduct shall be a minimum of 8m outside of the boundary of the River Till section of the River Avon SAC. D-BIO2 requires no piling works within 8m for the boundary of the River Avon SAC. It is noted that the works required at the River Avon crossing are minimal and no piling is proposed.</p>
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28 Esso Petroleum (REP6-049)

28.1	Table Title	
	Matter Raised	Highways England's Response
28.1.1	<p>[In response to CA.2.27 and DCO 2.71]</p> <p>CA2.27 – The Protective Provisions have been agreed. Esso Petroleum Company Limited is in contact with Highways England with a view to producing the Works Agreement for the diversion.</p> <p>DCO 2.71 - The protective provisions have been agreed. There are no outstanding areas of disagreement.</p>	<p>Highways England thanks Esso Petroleum Company Limited for confirming that the Protective Provisions have been agreed.</p> <p>The text within the appended version of the Protective Provisions for the Protection of Esso Petroleum Company, Limited (attached to the Veale Wasbrough Vizards LLP representation on behalf of Esso Petroleum Company, Limited [REP6-049]), reflects that in the deadline 6 versions of the draft Development Consent Order (dDCO) [REP6-005] (clean version) and [REP6-006] (version with track changes), in Schedule 11, save for the following differences:</p> <p>(1) The deadline 6 versions of the dDCO, in Schedule 11 contain protective provisions in favour of five Affected Persons, those in favour of Esso Petroleum Company, Limited are in Part 4 of Schedule 11; and</p> <p>Within Schedule 11, the paragraph numbers are sequential, so the paragraph numbers for the Protective Provisions in favour of Esso Petroleum start at paragraph number 26 and proceed to paragraph 36.</p>

29 Friends of the Earth (REP6-050)

29.1	Response to ExA's Second Round of Written Questions (CC.23)	
	Matter Raised	Highways England's Response
29.1.1	<p>Introducing their 2019 Progress Report to Parliament, the Committee on Climate Change (hereinafter "the Committee") delivered their verdict that "UK action to curb greenhouse gas emissions is lagging far behind what is needed, even to meet previous, less stringent, emissions targets"...</p> <p>...On transport specifically they noted that "Transport is now the highest-emitting sector and must be a key contributor towards the reductions in greenhouse gas emissions needed over the period to 2030. Delays in making policy progress present a significant risk to meeting the fourth and fifth carbon budgets and are also likely to lead to higher costs and worse air quality. Policy progress over the last year has been very limited"</p> <p>In the wider public sphere too there is a growing sense of urgency about climate breakdown, evidenced by many extraordinary developments but perhaps above all by the growing school strike movement and the actions of Extinction Rebellion. As I write this response Bristol Bridge is currently under occupation and expected to remain so for a week.</p> <p>These all add up to a strong political and public demand for change – a sense that much higher priority needs to be given to the threat of climate breakdown and that there needs to be a radical step up in the scale and speed of the policy response.</p> <p>The decision on the Stonehenge Scheme sits squarely within this frame. In my submission to the Open Floor Hearing I pointed to its high carbon impact, and the high public profile that the project has.</p>	<p>Highways England consider climate change to be a very important issue, as such it has conducted a thorough assessment of the impact of the Scheme on climate change. The results of these assessments show that the Scheme will make an extremely limited contribution to the UK's carbon targets.</p> <p>The assessment set out in Chapter 14 of the ES concludes that there will be no significant effects on climate at either construction or operational stage from the Scheme (please see section 14.9 and the 'Climate' section of Chapter 16, Summary of Effects [APP-054]). Please also see response to item 44.4 in the Comments on Written Representations Report submitted at deadline 3 [REP3-013] which summarises (as set out in Chapter 14) the ES assessment of carbon emissions, reiterating that the Scheme will not have a material impact on the ability of the UK Government to meet its carbon reduction targets. The response to item 44.4 also puts this assessment into the context where the case for the Scheme has been identified: the proposed road improvement is needed to address the local and regional demands arising from the current issues with the road and to deliver the objectives set for the Scheme.</p> <p>The Applicant also notes paragraph 5.17 of the National Policy Statement for National Networks (NPSNN) which states that it is "very unlikely that a road project will in isolation affect the ability of Government to meet its carbon reduction plans". In the context of the Scheme, we agree with that statement and that this Scheme is assessed and demonstrated to be such a policy compliant case.</p>

29.1.2	<p>The scheme in isolation would impact negatively on the achievement of carbon reduction goals, especially in its operation, because of the additional carbon emissions it gives rise to by itself. This is reflected in the high negative value assigned to its carbon emissions.</p> <p>The scheme also has knock-on effects, particularly in its implications for the remainder of the A303 corridor. Part of its justification is the creation of a high speed corridor directly to the south west, yet the cumulative impact of all the separate projects needed to carry out this aim has not been calculated – there has been no Strategic Environmental Assessment (although Friends of the Earth and other participants have argued that there should have been).</p> <p>The applicants argue that the emissions from the scheme are acceptable because by itself they are only a very small percentage of the overall carbon budget – stated as .03%. This figure will rise as budgets are recalculated in the light of the net zero by 2050 target, but not by an order of magnitude – it would be no more than 0.1%.</p> <p>I argued at the Open Floor Hearing that the approach of slicing up a road building programme into sufficiently small pieces so that each on its own appears to be of little account does not do justice to the response now required in a climate emergency.</p>	<p>In terms of Friends of the Earth’s comment regarding a strategic environmental assessment, we refer to our previous response given at paragraphs 16.1.2-16.1.3 of our Comments on Written Representations Report [REP3-013]. In summary, the relevant consenting framework for strategic road improvements is set mainly by the National Networks NPS.</p> <p>The “South-West Corridor” proposal, although it calls itself a programme in some literature, is not a plan or programme within the meaning of the SEA Directive (European Directive 2001/42/EC). In the context of the DCO, the plan or programme which constrains the decision making (and requires a SEA) is the NNNPS. Therefore, Highways England does not consider that a SEA is required for the corridor approach and such an assessment has not been undertaken.</p> <p>With respect to cumulative impact, please also see the Applicant’s response to Written questions CC.2.2 [REP6-025]. In brief, the Applicant does not consider that it is possible to provide an accurate or robust assessment of the contribution made by the Scheme to the cumulative impact, together with other Schemes, on overall greenhouse gas (GHG) emissions because:</p> <ol style="list-style-type: none"> The receptor for GHG emissions is the global atmosphere, which has a relatively large carrying capacity for GHG emissions in relation to any single project. It is unlikely that any single UK project (in isolation or cumulatively) would have a material impact on global GHG emissions. By its nature, the GHG assessment is implicitly cumulative. Data used to assess GHG emissions from road users over the life of the scheme is based on the traffic model. This model takes into consideration the impact of planned development on road use. The cumulative impact of the Scheme and these other developments is therefore included. Thirdly, on the basis of the reported metric – carbon dioxide equivalent (CO₂e) - all emissions contribute equally to climate change. <p>See also response to item 44.4 in the Comments on Written Representations Report submitted at deadline 3 [REP3-013] which explains that as set out in</p>
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		<p>Chapter 14 of the ES, the Scheme assessment of carbon emissions concludes that the Scheme will not have a material impact on the ability of the UK Government to meet its carbon reduction targets, and that the proposed road improvement is needed to address the local and regional needs arising from the current issues with the road and to deliver the objectives set for the Scheme.</p> <p>The Applicant's responses to Written Questions CC.2.1 and CC.2.5 [REP6-025] account for the Government's revision to UK carbon reduction targets. Reference is made to the targets set within the Climate Change Act 2008 (2050 Target Amendment) Order 2019 (the 2019 Order), which amends the Climate Change Act 2008 by revising the previous 2050 carbon target (of an 80% reduction of carbon emissions compared to 1990 levels) to a 100% reduction, i.e. a net zero carbon target.</p> <p>We also refer to the Applicant's response to Written Question CC.2.2 [REP6-025] for further detail in respect of the new net zero carbon budget. This response notes that, whilst the UK Government's revised carbon budgets (taking account of the new net zero target) are yet to be published, the Scheme's GHG impact as a proportion of total UK carbon emissions is negligible such that it can be considered to be immaterial. In this context, the Applicant does not consider that the new net zero target is likely to affect the conclusions of the existing assessment.</p>
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30 Grove Property (REP6-052)

30.1	Table Title	
	Matter Raised	Highways England's Response
30.1.1	<p>Our client, Grove Property, owns land included within the draft DCO (Book of Reference, plot number 09-14, 'the Property') over which the Applicant is seeking the 'creation and compulsory acquisition of new rights' both for utility diversion works and access to the works compound. The powers would also enable the temporary occupation of the Property for the construction of the scheme.</p> <p>The land is tenanted on a long-lease to Travelodge Hotels Limited ('Travelodge') with sub-lessees being Little Chef, Shell and Burger King.</p> <p>We understand there is an alternative means of access to the works compound (plot 09-12) via Ratfyn Farm (see plots 09-24, 09-25, 09-27, 09-30, 09-37, 09-38 and 09-41 over which powers are also being sought). Why is the Promoting Authority seeking two alternative accesses to the same land? The imposition of the permanent rights over 09-14 will have a detrimental effect on our Clients tenants' enjoyment and use of the land. The proposed use of the land will lead to a claim for injurious affection as a result of the affect the rights on the land.</p> <p>It is not demonstrated or justified in the application the reason for passing utilities through our client's land or what alternatives have been explored. There appears to be other land in the vicinity of Plot 09-14 which is not occupied by commercial users which could be used for utility diversions.</p> <p>It is possible to exercise temporary powers to facilitate a means of access for a temporary compound. Once the compound has been restored and returned to the landowner clearly there is no need for</p>	<p>The Applicant's written summary of oral submissions made at the Compulsory Acquisition Hearings held on 9th and 10th July 2019 [REP5-002], section 8.1, page 2.25-2.26, explains that:</p> <p>"Mr Richard Turney (on behalf of the Applicant) referred to Land Plan Sheet 9 of 15 [APP-005] and explained that Travelodge were tenants of the plot in question [plot 09-14]. The nature of the interest being sought by way of compulsory acquisition is limited to the permanent acquisition of rights over the land parcel for the purpose as described in the draft DCO (at Schedule 4) [REP4-018] and in the Statement of Reasons (at Annex A) [APP-023]; any other interference would be temporary only. At the current design stage, exact details are not known and many of the items raised are in relation to that point. In the final Scheme arrangement, Travelodge [and Grove Property] will have the same access to site as they do now."</p> <p>There is only one proposed means of access to the works compound in plot 09-12, through plot 09-14, as shown on Figure 2.7E of the ES - Illustrative construction layout including compounds and haul routes [APP-061]. The powers sought in respect of this access are temporary – no permanent rights of access are required for Highways England to access the works compound. There are, however, two alternative diversion routes identified for utilities (for Scottish and Southern Energy (SSE) and Wessex Water). Powers to create and acquire new rights compulsorily are required over both of these routes as discussions with the relevant utility companies have not yet confirmed the final alignment of those routes. While preliminary discussions with SSE have indicated a preference for the route to the south, down Ratfyn Track (which is outside of Grove Property's land), this has not yet been confirmed. Discussions with Wessex Water are continuing and are expected to result in the need to require rights across Grove Property's land.</p>

	<p>any access right. In terms of the utility connection again this can be installed under temporary powers and then a deed of grant entered into between the landowner and the statutory undertaker. My client would welcome further discussions on this point.</p>	<p>As set out in the Statement of Reasons [APP-023] section 5.3.12: "Provision has been made in the DCO application for the creation and acquisition of new rights to accommodate the diversion of statutory undertakers' apparatus over a number of plots (as identified in Schedule 4 to the Draft DCO). Whilst these rights are shown as applying to the whole of the relevant plots, following the completion of the detailed design by the contractor the final areas required for the works to deliver the diversions will be reduced to apply only to defined corridors. These corridors are generally expected to be between 6 and 12m wide, other than for the oil pipeline, to which a 50m wide exclusion zone applies, and consideration will be given to combining corridors for statutory undertakers' apparatus where practicable. The power to acquire rights would then only be implemented by the Applicant in respect of the land in the corridors so identified; it would not be implemented over the entirety of the plots in question. At this stage, however, as explained above, it is not practicable to determine the exact locations of the required corridors and hence powers are sought on the basis explained above."</p> <p>The rights sought could be provided in the form of a legal easement; however, this has yet to be confirmed, as with the final residing right. Until the scope of the required works is confirmed by SSE and Wessex Water through this design it is necessary and appropriate for Highways England to continue to seek compulsory acquisition powers to safeguard the delivery of the Scheme. However, Highways England will not use these powers if they are not needed for the scheme or if an easement (or a wayleave) can be agreed between parties.</p> <p>Highways England would welcome engagement and further discussions with Grove Property on these points.</p>
30.2	Response to the ExA's Second Round of Written Questions	

	Matter Raised	Highways England's Response
30.2.1	<p>[In response to CA 2.51]</p> <p>Gateley Hamer have been appointed by Grove Property since 3 May 2019 and have been liaising with their tenant in relation to the scheme proposals. A letter, dated 24 May 2019, was received by our client from the VOA, on behalf of the Applicant, advising our client to appoint an agent and stating that Highways England 'seek to acquire land by negotiation wherever possible'.</p> <p>Since then, the Applicant and VOA have not sought to engage with Gateley Hamer or our client who still have significant concerns over the short term and long-term impact on the site. We have been engaging with the agent appointed by Travelodge and are working towards an agreed position. We wish to meet with the Applicant to understand the need to seek rights over the land and agree mitigation to address the impacts of the scheme.</p> <p>Until negotiations have commenced to enable legal agreement to be entered into, my client wished to reserve the right to make further written representations during the Examination, and to appear at the Compulsory Acquisition Hearing.</p>	<p>The updated Schedule of Land Acquisition and Temporary Possession Negotiations submitted by the Applicant at deadline 6 [REP6-017] explains that the Applicant has been in contact with this Interested Party regularly since May 2019. The most recent entries in this table for Grove Asset 10 S A R L are as follows:</p> <p>"Email – Providing new primary contact for Grove Asset 10 S.A.R.L – 02/06/2019</p> <p>Email – Offer of meeting to discuss any concerns and the process going forward – 18/06/2019</p> <p>Email – Offer of a meeting to discuss any concerns and the process going forward – 19/07/2019"</p> <p>Following receipt of this submission, the Applicant has made a further attempt to contact Gateley Hamer in order to arrange a meeting to discuss the above.</p>

31 ICOMOS-UK (REP6-054 and REP6-055)

31.1	Response to ExA's Second Round of Written Questions	
	Matter Raised	Highways England's Response
31.1.1	<p>[HW 2.1]</p> <p>ICOMOS-UK acknowledges that what is now the A303 road has provided visual access to the main henge since the early 1800s and that today some motorists appreciate fleeting glimpses of the henge as they travel west.</p> <p>This is one way of viewing the henge. There are many other ways of viewing this monument. And it is also the case that the monument is only part of an exceptionally large pre-historic landscape. The henge may be the major standing remains but it is the 'icing on the cake' in terms of how it relates to the many earlier ceremonial structures across the landscape for which it appears to be a focal point.</p> <p>The view from the A303 of the henge is not part of the OUV of the site: that does not mean it is not of local value.</p>	<p>Please see the Applicant's response to Written Question HW.2.1 [REP6-029]. The Applicant agrees with ICOMOS-UK's comment that the view from the A303 is not part of the OUV of the site, and further notes that the impact of the Scheme on local people and visitors (including the impact on passing motorists) has been fully assessed in the Heritage Impact Assessment (HIA) Section 6.14, Public Visibility of monuments and this has been part of the assessment.</p> <p>The Scheme has had regard to also maintaining local views from freely accessible locations as set out in a number of responses including response to Written Question SE.1.16 in [REP2-035].</p>
31.1.2	<p>[LV 2.1 Integrity of landscape and cultural heritage]</p> <p>This question cuts to the heart of what the public Examination is considering: whether the Stonehenge WHS should be considered as a single entity for which integrity is crucial, or an ensemble of discrete assets, between which spaces have little or low value.</p> <p>ICOMOS-UK offers the following comments on the points raised:</p> <p>Attributes</p>	<p>Attribute-focussed HIA</p> <p>The Applicant considers that the HIA has been carried out accurately in compliance with the Guidance on Heritage Impact Assessments for Cultural World Heritage Properties adopted by the International Council on Monuments and Sites (ICOMOS 2011) and with a full appreciation and understanding of the importance of the WHS and its OUV including the Integrity, Authenticity and the Attributes that convey OUV.</p> <p>Highways England is concerned to protect and conserve the WHS and sustain its OUV, and has followed the established method by which to assess the impact on the WHS, by assessing the impact on the tangible heritage</p>

<p>The HIA [APP-195] on pages 5-6 makes reference to the attributes that convey OUV as set out in the MP, as follows:</p> <ul style="list-style-type: none"> • The physical remains of the Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to the landscape. • The siting of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to the landscape. • The design of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to the skies and astronomy. • The siting of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to each other. • The disposition, physical remains and settings of the key Neolithic and Bronze Age funerary, ceremonial and other monuments and sites of the period, which together form a landscape without parallel. • The influence of the remains of the Neolithic and Bronze Age funerary and ceremonial monuments and their landscape setting on architects, artists, historians, archaeologists and others.' <p>ICOMOS-UK fully supports this over-arching list of attributes. We would like to point out, though, that attributes are not formally defined or approved by the UNESCO World Heritage Committee. It is recommended that they should be broadly defined in the Management Plan as a guide to protection and management, following which more specific definitions could be made according to need.</p> <p>For any HIA, it is normally necessary for these broad attributes to be more specifically defined in relation to potential impacts. This more detailed definition has not taken place in the HIA that is now being considered. For instance, there has been no attempt to define what is meant by the siting of the Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to each other, in relation to the landscape, or in relation to the skies and astronomy, and nor</p>	<p>assets and intangible aspects that convey Attributes of OUV, the values that make it a WHS. This then leads to an assessment of impacts on the Attributes which express the OUV and ultimately assesses the overall effect on OUV and therefore on the WHS.</p> <p>The HIA was prepared in line with the Guidance on Heritage Impact Assessments for Cultural World Heritage Properties adopted by the International Council on Monuments and Sites (ICOMOS 2011), which aims to deliver relevant assessments. This notes "Where cultural heritage sections of EIAs clearly do not focus on the attributes of OUV, they would not meet desired standards in managing change at WH properties." (ICOMOS 2011, para. 2-1-7). In accordance with ICOMOS 2011 Guidance, the ES [APP-044] and the HIA [APP-195] are clearly and directly tied to the attributes of OUV (ICOMOS 2011, P. 1, para. 4). The guidance notes that "[HIA] should describe the condition of the whole and of individual attributes and components, physical characteristics, sensitive viewpoints and intangible associations which may relate to attributes. This should focus on areas affected in particular but must include a description of the whole." [ICOMOS 2011, p. 19, para. 5].</p> <p>ICOMOS Guidance on Heritage Impact Assessments (ICOMOS 2001) notes that "World Heritage sites are thus single heritage assets with an international value that has been clearly articulated. Not everything within them contributes to OUV, but those attributes that do must be appropriately protected. This guidance sets out a methodology to allow HIAs to respond to the needs of World Heritage sites, through considering them as discrete entities and evaluating impact on the attributes of OUV in a systematic and coherent way." (ICOMOS 2011, purpose). "World Heritage properties need to be seen as single entities that manifest OUV. Their OUV is reflected in a range of attributes, and in order to sustain OUV it is those attributes that need to be protected. Thus the HIA process needs to consider the impact of any proposed project or change on those attributes, both individually and collectively, rather than on a standard range of receptors (ICOMOS 2011, p. 1).</p> <p>In accordance with ICOMOS 2011 Guidance, the ES [APP-044] and the HIA [APP-195] are clearly and directly tied to the attributes of OUV (ICOMOS 2011, P. 1, para. 4). The HIA has considered the Statement of Outstanding</p>
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	<p>has any attempt been made to consider how the landscape without parallel is composed¹.</p> <p>The England Heritage website² notes that the 'remarkable ancient landscape of early Neolithic, late Neolithic and early Bronze Age monuments' contains 'a vast source of information about the ceremonial and funerary practices of Neolithic and Bronze Age people' and 'can also help our understanding of regional and international contacts from the 4th to 2nd millennia BC, and shed light on how prehistoric society was organised'. This 'vast source of information' should have been used to inform an understanding of how the landscape without parallel was organized which could then have been used as a basis for a detailed definition of attributes to underpin the HIA.</p>	<p>Universal Value, Integrity and Authenticity (SoOUV) adopted by the World Heritage Committee in June 2013 (UNESCO 2013, 291–94), and the Attributes set out in the WHS Management Plan that include the characteristics that convey the values identified in the Statement of OUV [APP-195, para. 5.8.14].</p> <p>Relationship between SoOUV and Attributes of OUV defined in 2015 WHS Management Plan</p> <p>The Applicant has not considered it appropriate or necessary to more specifically define the attributes of OUV in the HIA, as it considers the attributes to already be sufficiently defined.</p> <p>Highways England notes that the retrospective Statement of Outstanding Universal Value was formally adopted by the World Heritage Committee in 2013 (UNESCO 2013, 291–94). As noted in the HIA, "<i>The SoOUV forms the focus of all protection and management decisions. The SoOUV clearly sets out in detail the reasons why and the criterion for the WHS having OUV and how the WHS embodies this. It also sets out the Integrity and Authenticity of the WHS as well as detailing the future protection and management requirements of the WHS.</i>" [APP-195, para. 6.6.9].</p> <p>UNESCO's Operational Guidelines for the Implementation of the World Heritage Convention define attributes as 'a direct tangible expression of the OUV of the property' (UNESCO 2017, 100). As noted in the HIA, "<i>Attributes that convey OUV are expressed by physical elements and tangible or intangible aspects that must meet the conditions of Integrity and Authenticity. 'Attributes are aspects which convey or express the OUV of the WHS and which contribute to and enhance understanding of the OUV. The key purpose of identifying attributes is so that they can be protected, managed and monitored and are needed in order to assess planning applications, when considering planning allocations and when planning projects or other interventions.'</i> (UNESCO 2017, Paras 88 and 89, and Annex 5). '<i>Attributes are a means of understanding how OUV is conveyed, and they enable the definition of the cultural values and significance of a heritage place to society. This 'values-led' approach is recommended as a planning tool for managing World Heritage properties.'</i> (UNESCO / ICCROM / ICOMOS / IUCN 2013)." [APP-195, para. 6.6.14].</p>
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		<p>and where necessary, the attributes may need to be more specifically defined during the HIA process.</p> <p>Such definition of attributes should not seek to re-define the SoOUV, but to describe the attributes in a way which assists decision-making on the proposed change. It should be noted that OUV is defined at the time a WH property is inscribed on the WH List and cannot be changed without a re-nomination which goes through a full evaluation process.' [ICOMOS 2011, paras. 4-6 to 4-8].</p> <p>In this case, it was considered that the attributes of OUV are sufficiently defined in the recent 2015 WHS Management Plan to be directly useful to impact assessment work [Simmonds & Thomas 2015].</p> <p>Assessment of Scheme impacts and effects on heritage assets conveying Attributes of OUV</p> <p>The HIA considers, in detail, the attributes of OUV as explained in the 2015 WHS Management Plan. The HIA "takes into account the SoOUV, Attributes of OUV, Integrity and Authenticity, and considers the relationship between Attributes of OUV, Integrity and Authenticity." [APP-195, para. 5.8.14]. The elements of the WHS that would be affected by the Scheme have been assessed in the HIA, and in the conclusions with respect to the impact on the WHS as a whole and its OUV are for the entire WHS. [APP-195, p. 77, para. 5.3.18].</p> <p>What is meant by 'the siting of the Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to each other' is defined in the WHS Management Plan's explanation of Attribute 5, The siting of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to each other, cited in the HIA [APP-195, p. 152]; and its consideration of this attribute's Authenticity [APP-195, p.155]. Associations between sites/monuments, spatial patterning, situations that may reference to earlier monuments, locational foci, relationship to watercourses and dry valleys, chronology and contemporaneity, memory and intervisibility are described and assessed with reference to Asset Groups and Attributes of OUV, where applicable, in HIA Section 6.9 Asset Groups: baseline description and assessment of Scheme impacts and effects and in ES</p>
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		<p>reference to Asset Groups and Attributes of OUV, where applicable, in HIA Section 6.9 Asset Groups: baseline description and assessment of Scheme impacts and effects. The impacts and effects of the Scheme on Attribute of OUV 4, the design of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to the skies and astronomy, are assessed in the HIA [APP-195, paras. 9.3.20-21; paras. 9.4.24-28].</p> <p>With regard to how the landscape without parallel is composed, this is defined in the WHS Management Plan's explanation of Attribute 6, the disposition, physical remains and settings of the key Neolithic and Bronze Age funerary, ceremonial and other monuments and sites of the period, which together form a landscape without parallel. The WHS Management Plan 2015 explanation of the attribute is cited in the HIA [APP-195, p.152-3]; and its consideration of this attribute's Authenticity [APP-195, p.155]. The design, position and interrelationships of sites and monuments, their physical and topographical interrelationships, their assumed past and their current prominence or lack of prominence, their setting, clusters of monuments and blank areas, the condition of remains and the legibility of relationships is described and assessed with reference to Asset Groups in HIA Section 6.9, Asset Groups: baseline description and assessment of Scheme impacts and effects and Section 6.10, Discrete and isolated assets: baseline description and assessment of Scheme impacts and effects. The impacts and effects of the Scheme on Attribute 6 are assessed in the HIA [APP-195, paras. 9.4.34-37].</p> <p>As noted above, the detailed definition of the attributes that underpin the HIA is provided in the 2015 WHS Management Plan. The HIA identifies and assesses Asset Groups, isolated and discrete designated heritage assets, and non-designated isolated and discrete assets which convey these Attributes of OUV. The 'vast source of information' within the landscape was used to inform an understanding of 'how the landscape without parallel was organised', supported by a comprehensive programme of evaluative fieldwork [APP-195, paras. 6.8.9-6.8.35]. The HIA process was supported by extensive analysis of spatial, topographic and chronological relationships. The data considered is summarised in inventories of heritage assets and asset groups with summary descriptions [APP-197; APP-212; APP-216], a description of previous archaeological and antiquarian investigations within the Stonehenge</p>
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		part of the WHS [APP-199], the Archaeology Baseline Report [APP-211], and figures illustrating the archaeological landscape of the WHS and potential Scheme impacts upon it [APP-205-210]. The Cultural Heritage Setting Assessment [APP-218] explores intervisibility and key relationships between monuments.
31.1.3	<p>[LV 2.1 Integrity of landscape and cultural heritage]</p> <p>Asset Groups and Discrete Assets</p> <p>Having accepted that the list of attributes from the Management Plan conveys OUV, the HIA text moves on to identify what are called ‘asset groups and discrete assets’ on pages 9-12 that confusingly are seen to ‘convey attributes of OUV’. These asset groups are listed as 32 separate groups within the WHS and a smaller number beyond the boundaries. The 25 discrete assets are said to be considered where the scheme impacts on them or their setting. But no links have been provided between these asset groups/ assets and the attributes.</p> <p>The potential impact of the scheme on the ‘asset groups and individual assets’ is set out in Tables 1 and 2 of the HIA. Following that a further Table 3 sets out impact on the attributes of OUV without a clear explanation as to how one has led to the other. If impact has only been assessed on individual asset groups or assets, it is then impossible to draw a conclusion as to the potential impact on the attributes of OUV that relate to spatial arrangements between monuments and sites, or between these and the landscape, or to the overall landscape without parallel.</p> <p>The texts in paragraphs 2 and 3 on pages 23-4 attempts to do this and mentions confusingly impact on the ‘setting’ of asset groups as in adverse impact on ‘the setting of and relationships between monuments and the landscape including, amongst others, the Winterbourne Stoke Crossroads Barrows, the Diamond Group and the Normanton Down Barrows, and wider relationships between Neolithic longbarrows in and beyond these Asset Groups’. Although this adverse impact is not related specifically to OUV, the overall</p>	<p>Asset groups, discrete assets and attributes of OUV</p> <p>With regard to the selection of Asset Groups for assessment, Highways England would refer the Examining Authority to the Applicant’s response to the Examining Authority’s Written Question CH.1.7 [REP2-025, pp.5-15–16] and the Applicant’s comments [REP3-013, para. 21.4.35 – .37] on the Council for British Archaeology’s Written Representation [REP2-071]. Asset groups and discrete assets contribute to conveying OUV, rather than conveying OUV in themselves.</p> <p>Links between Asset Groups and the Attributes of OUV are clearly described in HIA Section 6.9, Asset Groups: baseline description and assessment of Scheme impacts and effects [APP-195]. For each Asset Group, its contribution to the Attributes that convey the OUV of the WHS is described, as well as its contribution to the integrity and authenticity of the WHS.</p> <p>Regarding the ICOMOS UK comment that ‘it is then impossible to draw a conclusion as to the potential impact on the attributes of OUV that relate to spatial arrangements between monuments and sites [Attribute 3], or between these and the landscape [Attribute 5], or to the overall landscape without parallel [Attribute 6]’ we would refer the Examining Authority to item 31.1.2 above.</p> <p>Assessment methodology</p> <p>Tables 1, 2 and 3 of the HIA Non-Technical Summary provide summary data; full methodological data is provided within the considerably longer HIA [APP-195].</p> <p>The HIA considers the aspects of the proposed Scheme in relation to Asset Groups, Discrete Assets and Attributes of OUV and assigns a magnitude of impact (change) to this, as set out in Table 4 of APP-195 [Section 5.8, Assessment of scale of specific impact and change & Section 9.4, Impacts</p>

conclusion drawn is that ‘the Scheme would have a Negligible Negative impact on this Attribute of OUV, resulting in a Slight Adverse effect’.

Moreover it is asserted that damage to one part of the WHS can be offset by benefits elsewhere. For instance, the detrimental impacts of partially severing physical relationships between important Asset Groups such as the Winterbourne Stoke Crossroads Barrows (AG16) and the Diamond Group (AG17) and dividing the Wilsford/Normanton dry river valley in the western tunnel approaches east of the existing A360, are seen to be offset by advantages elsewhere such as in connecting parts of the Avenue.

As ICOMOS has already pointed out in its original submission [REP2-195], positive gains in one part of a WHS cannot outweigh negative impacts in other parts of the site.

and effects of Scheme on Attributes of OUV, Integrity and Authenticity]. This table is based on Guidance on HIAs for Cultural World Heritage Properties (ICOMOS 2011, appendix 3A). The definitions within Table 4 enable both adverse and beneficial change to be considered. The methodology, as set out in paragraphs 5.8.5-5.8.14 of APP-195 then provides a guide to the relationship between the sensitivity of a receptor and the magnitude of impact, and that the assessor is able to use professional judgement to differ from the matrix provided in APP-195 Table 5, subject to provision of reasoned justification.

The anticipated impacts of the Scheme on the fabric and setting of Asset Groups is described and the scale or severity of impact is described in HIA Section 6.9, Asset Groups: baseline description and assessment of Scheme impacts and effects. The significance of effect of the Scheme upon Attributes of OUV expressed by the Asset Group is assessed in accordance with Table 4: Method for the assessment of the magnitude of impact upon heritage resources and Table 5: Significance of effect assessment matrix (based on ICOMOS 2011, p.9).

Scheme impacts and effects on thematic aspects such as long barrow groupings, astronomical aspects, tourism are addressed in HIA 9.3 Potential impacts and effects of Scheme: aspects of the WHS [APP-195].

Scheme impacts and effects on Attributes of OUV, Integrity and Authenticity are considered in HIA Section 9.4 [APP-195].

Careful consideration has been given to the balance of beneficial and adverse impacts presented in HIA Section 11, Evaluation of overall impact and significance of effect of Scheme on the OUV of the WHS. This considers impacts and effects in relation to Scheme locations, Attributes of OUV, integrity and authenticity, and assesses the overall significance of effect of the Scheme. Section 12, Summary and conclusions, considers the Scheme’s alignment with WHS Management Plan vision, aims and policies [APP-195, Section 12.3] and effects on the OUV of the WHS [APP-195, Section 12.4].

With regard to the effect of the Scheme on the WHS as a whole, we would also refer the Examining Authority to the Applicant’s response to the Examining Authority’s Written Question CH.1.4 [REP2-025, pp.5-10–11].

Setting assessment

ICOMOS UK has commented that ‘texts in paragraphs 2 and 3 on pages 23-4 attempts to do this and mentions confusingly impact on the ‘setting’ of asset groups as in adverse impact on ‘the setting of and relationships between monuments and the landscape including, amongst others, the Winterbourne Stoke Crossroads Barrows, the Diamond Group and the Normanton Down Barrows, and wider relationships between Neolithic longbarrows in and beyond these Asset Groups’.

The Applicant would contend that the text is not confusing and that the setting of assets and Asset Groups that contribute to the OUV of the WHS is clearly a contributing factor to Attribute 3 of the OUV: The siting of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to the landscape. The text, as set out in the Non-Technical Summary, is a condensed version of the text within the main body of the HIA [APP-195; paragraphs 9.4.17-9.4.23].

Scheme impacts on Asset Groups which convey Attributes of OUV, or their setting, are indicated systematically in HIA Section 6.9, Asset Groups: baseline description and assessment of Scheme impacts and effects [APP-195] under the rubric ‘Assessment of impact of Scheme’. The full setting assessment is presented in ES Appendix 6.9 Cultural Heritage Setting Assessment [APP-218].

The HIA [APP-195, para. 5.3.18] notes that “In accordance with the advice on Integrity in the Operational Guidelines (UNESCO 2017), the setting assessment considers the ‘Relationships and dynamic functions present in cultural landscapes, historic towns or other living properties essential to their distinctive character should also be maintained.’ (UNESCO 2017, para. 89).” ES Appendix 6.9, Setting Assessment [APP-218] notes that “Landscape integrity is [...] viewed as an original attribute of setting and one whose retention or restoration is desirable and positive.” [APP-218, para. 3.6.4]. The setting assessment follows Historic Environment Good Practice Advice in Planning Note 3: The Setting of Heritage Assets, 2nd Edition (GPA3; Historic England 2017), and notes that “‘archaeological setting’ is discussed in terms of a persistent presence in the landscape (e.g. palimpsest street patterns or

landscapes that preserve an older imprint), relationships with the surrounding topography, and between the sites of buried assets" [APP-218, para. 3.6.5].

As noted in the Applicant's Response to the Examining Authority's Written Questions - 8.10.5 Cultural heritage (CH.1.7) [REP2-025], the Scheme design has been developed having regard for the potential impact of the Scheme on the World Heritage Site and its OUV. The preferred route for the Scheme was selected to sustain OUV, by avoiding the archaeological remains, important sites and monuments that contribute to the OUV of the WHS. Subsequent careful and sensitive design development, including mitigation measures to limit or avoid impacts, has been informed by ES Appendix 6.9 - Cultural Heritage Setting Assessment [APP-218] and ES Appendix 6.1, Heritage Impact Assessment (HIA) [APP-195]. Further details of how the Scheme has been developed to avoid and minimise adverse impacts on cultural heritage and to protect or enhance the setting of the WHS are provided in ES Chapter 6, Cultural Heritage [APP-044], Section 6.8, Embedded Mitigation, and Table 6.9.

The setting assessment relies on both visible and non-visible factors such as cultural or historic connections, as set out in response CH.1.17 [REP2-025].

Archaeological assets assessed in the Setting Assessment encompass "all high and very high value Asset Groups and discrete assets whose settings are potentially changed by the Scheme" [APP-218, para 3.3.1].

As noted in the Applicant's Response to the Examining Authority's Written Questions - 8.10.5 Cultural heritage (CH.1.4) [REP2-025], the setting assessment considered kinetic factors/movement through the landscape, including consideration of earlier studies including both static viewsheds and experiential traverses [APP-218]. The Heritage Impact Assessment (HIA) notes with regard to sequential effects of moving through the landscape on established routes that "Site visits involved extensive walking through the landscape to experience changing views of Asset Groups when moving along permissive paths" (Environmental Statement Appendix 6.1 - Heritage Impact Assessment [APP-195, para. 5.3.12]).

Balancing damage to one area of a cultural landscape and enhancement to another

As noted in the written summary of the Applicant's oral submissions put at Cultural Heritage issue specific hearing 2 on 5th and 6th June 2019 - June 2019 [REP4-030]:

"one of the key aspects to be understood comes from the ICOMOS Guidance, which identifies that the process of assessing the impact of the Scheme on the WHS requires consideration of harm against benefits. Mr Taylor QC cited paragraph 2-1-14 of the guidance which refers to "[b]alanced and justifiable decisions", and to paragraph 2-1-5 which provides that "[u]ltimately, however, it may be necessary to balance the public benefit of the proposed change against the harm to the place". Mr Taylor QC referred to paragraph 5-9 of the guidance which provides the example of removal of a road from the vicinity of a building which conveys OUV as a major beneficial effect. Paragraph 6-2 reiterates that "Ultimately, however, it may be necessary to balance the public benefit of the proposed change against the harm to the place". Mr Taylor QC submitted that a balancing exercise is to be undertaken in the decision-making process. A HIA has been undertaken, and it weighs adverse and beneficial impacts on the attributes of OUV against each other, and concludes that overall the Scheme will have a slight beneficial effect on the OUV of the WHS. The balance undertaken in the HIA is limited to heritage considerations and is not the overall balancing that is required of the Examining Authority and Secretary of State. That overall balancing exercise and how the Applicant considers all the benefits and impacts of the Scheme should be weighed against each other is set out in the Case for the Scheme and NPS accordance [APP-294]." (please see item 3 (vi) of [REP4-030]).

See also response to item 11.2.31 in the Comments on any Further Information at deadline 4 [REP5-003], and the Applicant's Written Summaries of oral submissions at Cultural Heritage Issue Specific Hearings (ISH2) [REP4- 030] (specifically Agenda Items 3(i), 3(v), 3(vi) and Appendix A to that document).

In terms of balancing the harm and benefits to attributes of OUV as a result of the Scheme, in order to arrive at an overall effect on the WHS as a whole, the Heritage Impact Assessment has been prepared following ICOMOS guidelines (https://www.icomos.org/world_heritage/HIA_20110201.pdf). The scope and approach of this assessment, which is reported in ES Appendix

		<p>6.1 [APP-195], was endorsed by UNESCO/ICOMOS in their report from their third advisory mission on the scheme early in 2018 (https://whc.unesco.org/en/list/373/documents/). The Applicant considers that the HIA has been carried out accurately and with a full appreciation and understanding of the importance of the whole WHS and its OUV. It considers the approach to balancing the impacts of the Scheme on attributes of OUV in order to reach an overall conclusion in terms of the impact on the OUV of the WHS is appropriate, and necessary in order to inform the tests required to be undertaken by the Secretary of State.</p>
31.1.4	<p>[LV 2.1 Integrity of landscape and cultural heritage]</p> <p>Recent archaeological evidence</p> <p>A further aspect that is conspicuously absent from the HIA is the idea of the landscape revealing more than was known at the time of inscription and thus the need to protect areas related to recent discoveries. New information has now revealed new evidence for sites and monuments relating to the Neolithic and Bronze Age periods and strengthened interlinkages between the various parts of the whole and the potential huge significance of 'ancient topography'. The HIA should have acknowledged the recent new evidence and how it strengthened certain attributes of OUV. This was not done; impact was only assessed on 'known' assets and asset groups.</p> <p>Other discoveries relate to earlier periods than Neolithic. The discovery of new evidence for earlier remains than those identified at the time of inscription is a regular phenomenon for WHS. While at Stonehenge there may be no clear links between the Palaeolithic evidence at the later Neolithic materials, the possibility of finding further evidence to support such links cannot be discounted. The new earlier evidence should be considered as supportive of OUV rather than part of it. The precautionary principle should apply to allow further evidence to emerge that might provide a more detailed chronology or context.</p>	<p>Recent archaeological evidence</p> <p>The Applicant disagrees that 'new' evidence has been produced regarding the archaeological resource both inside and outside the WHS that has not already been considered in a comprehensive manner in the HIA [APP-195].</p> <p>The Scheme has been the subject of a comprehensive archaeological evaluation programme which provides a robust baseline against which the Scheme impacts on heritage assets have been assessed (in the ES [APP-044]) and the impacts of the Scheme on the Attributes of OUV, Integrity and Authenticity of the WHS have been assessed (in the HIA [APP-195]). The conclusions of the Environmental Statement were informed by the results detailed in the evaluation reports [REP1-039 to REP1-056] as well as the previous archaeological work in the WHS. With regard to the evaluation results, the detailed reports [REP1-039 to REP1-056] set out the results in the context of the WHS and discoveries within its environs.</p> <p>The results of the confirmatory survey for the Winterbourne Stoke Bypass [REP1-049 to 050 and REP-052 to 053] and sampling work [the pig field test pitting within the Western Approach Road [incorporated within REP1-045 and REP1-046] were reviewed against the archaeological baseline, approach to mitigation and assessment of effects presented in the ES and they confirm its findings. In particular, the HIA considers Fieldwork undertaken for the present assessment [APP-195, Section 6.9], and considers Scheme impacts and effects on isolated and discrete heritage assets which convey Attributes of OUV [APP-195, Section 6.10] including non-designated isolated and discrete assets as well as the results of the archaeological evaluations.</p>

		<p>Please see also the Applicant's response to Examining Authority Question CH.1.1 [REP2-025].</p> <p>Remains other than those of the Early Neolithic to the Early Bronze Age</p> <p>Highways England accepts that such remains are significant in terms of evidence of earlier populations. Although assets that do not convey the attributes of OUV have not been considered in the HIA [APP-195, paras. 5.7.17 - 18], they are considered in ES Chapter 6, Cultural Heritage [APP-044].</p> <p>Regarding the relevance and consideration of periods other than the Neolithic and early Bronze Age in relation to OUV, please see the written summary of the Applicant's oral submissions from ISH2, Cultural Heritage Agenda items 4 (i), (ii) and (iii) [REP4-030, pp. 2-8 to 2-10]; Comments on any further information requested by the Examining Authority and received at deadline 4 [REP5-003; item 34.1.40]; Comments on Written Representations [REP3-013] in response to the Stonehenge Alliance regarding the WHS inscription and the Mesolithic period [REP3-013, paras. 12.3.103–105]; and to the Blick Mead Archaeology Team regarding the significance of Blick Mead as a heritage asset [REP3-013, paras. 60.2.2 & 60.2.7].</p>
31.1.5	<p>[LV 2.1 Integrity of landscape and cultural heritage]</p> <p>Archaeologically sensitive areas</p> <p>These new finds that either add to our understanding of OUV or are supportive of it are in areas that should have been identified as archeologically sensitive areas. A requirement to protect such areas 'which in the light of future research possibilities offer potential to contribute to and enhance such understanding' is set out in the Operational Guidelines. The key issue of the Stonehenge part of WHS is the extent of such areas as none have been defined. Given the new evidence that has emerged from recent non-invasive and invasive studies, it is becoming clear that the spaces between 'known' monuments and sites are far from empty, and the potential for finding the remains of or evidence for new 'monuments' is very high. It is also a possibility that the spaces between may in the future reveals evidence for why they were deliberately left as open areas.</p>	<p>Archaeologically sensitive areas</p> <p>Regarding comments about 'new finds' and 'new evidence' see the Applicant's response to item 31.1.4 above.</p> <p>The appellation "archaeologically sensitive area" is not formally recognised in England's heritage planning system's designations or nomenclature.</p> <p>Highways England defers to HBMCE (Historic England), the Government's historic environment adviser, and DCMS regarding the development and application of appropriate heritage protection legislation and guidance.</p> <p>Despite the fact that 'Archaeologically Sensitive Areas' are not formally recognised in the English planning framework, the Applicant has undertaken an appropriate assessment of the Scheme impacts on all designated heritage assets and also heritage assets that are currently non-designated, and has undertaken an HIA that assesses the Scheme impacts on the Attributes that convey the OUV of the WHS, its Integrity and Authenticity, as well as the</p>

They are many examples around the world of sacred landscapes where the spaces are as significant as the above ground remains, in terms of alignment, visual interlinkages or simply that some spaces were deliberately kept empty for ceremonial uses. One such example is the World Heritage site of Petroglyphs within the Archaeological Landscape of Tamgaly, Kazakhstan, where a large space, surrounding the main ensemble of prehistoric rock art, remains uninhabited and unused to the present day.

In ICOMOS-UK's view the whole Stonehenge component site should have been declared an archaeologically sensitive area as the essential context for known sites and to preserve the potential for future discoveries or future understanding of the meaning of spaces. And this is supported by the justification for criterion (ii) in the SoOUV which states that 'The monuments and landscape have had an unwavering influence on architects, artists, historians, and archaeologists, and still retain a huge potential for future research'.

The site has not been declared as an archaeologically sensitive area and is clearly not considered to be one as the approach being put forward to justify the length of the tunnel is based on the idea that areas between known asset group/assets can be sampled (at a very low level as has already been discussed) and where nothing is found considered suitable for major excavations. Such an approach mitigates against the idea of an overall sacred and ceremonial landscape that is 'without parallel' and which holds huge potential for research.

OUV of the WHS overall. The ES [APP-044] and the HIA [APP-195] have identified the significant effects and the DAMS (submitted at deadline 7) provides the strategy to enable the preservation in situ of sensitive archaeological sites as well as the research framework and methodological approaches for archaeological mitigation works.

The research potential of the WHS is recognised in the HIA [APP-195] which notes:

'It is not considered that the proposed Scheme will alter the nature, pace or quality of the research that will continue to take place within the WHS. The proposed Scheme will not impact upon the analysis, interpretation and dissemination of the results of field research. Although archaeological evaluations and excavations within the footprint of the proposed Scheme will remove archaeological deposits, the Scheme has been designed to minimise land-take and avoid known archaeological sites. Archaeological interventions in connection with the proposed Scheme are being undertaken to high standards developed with HMAG and the Scientific Committee and have the potential to contribute significant data to ongoing research priorities' [APP-195, 9.3.75].

The Scheme includes measures to facilitate the sharing and understanding of archaeological discoveries. Archaeological remains would be carefully excavated and recorded during the preliminary works phase, in advance of the construction of the Scheme. The draft Detailed Archaeology Mitigation Strategy (DAMS) submitted at deadline 6 [REP6-013] also identifies areas to be protected in situ. The DAMS has been developed in consultation with Wiltshire Council, Historic England and the Heritage Monitoring and Advisory Group (comprising Historic England, Wiltshire Council Archaeology Service, the National Trust and English Heritage Trust) and will be finalised prior to the end of the Examination, and is secured by requirement 5 of Schedule 2 of the draft Development Consent Order [REP4-018]. The project archive of reports and archaeological finds would be deposited in a local museum once the archaeological excavations have been analysed and published.

The spaces in between

The HIA has assessed the landscape as a whole with reference to Attribute of OUV 6, 'The disposition, physical remains and settings of the key Neolithic

and Bronze Age funerary, ceremonial and other monuments and sites of the period, which together form a landscape without parallel'. The HIA explicitly notes theories regarding apparent 'gaps', for example with regard to the absence of inter-visibility between monuments travelling along the Avenue [APP-195, p.351], the North Kite Enclosure 's possible association with a potential large enclosure around Normanton Down which could suggest a possible 'reserved space around Stonehenge and the Normanton Down barrows' [APP_195, p. 230], and the Wilsford dry valley [e.g. APP-195, p.231] and Stonehenge Bottom dry valley system [e.g. APP-195, 291]. The HIA notes a potential theory that "*Woodward and Woodward (1996) hypothesised that the main barrow cemeteries in this landscape were deliberately arranged in two concentric rings on the near and far horizons surrounding Stonehenge, perhaps defining what Amadio and Bishop (2010, 29) describe as 'a cordon sanitaire within a sacred geography.'*" [APP-195, para. 6.9.20].

The HIA [APP-195, Section 6.9] considers in detail the inter-relationships between typological monument groups (causewayed enclosures and long barrows) and the cluster of long barrows around the head of the dry valley between Wilsford and Normanton Downs. The HIA provides an overview of Neolithic and Early Bronze Age heritage assets, which considers theories regarding the spatial and topographical arrangement and visual relationships of monuments and the spaces between them [APP-195, Section 6.9].

The draft DAMS (submitted at deadline 7) provides for archaeological mitigation fieldwork within the road construction footprint. This commitment allows for the careful archaeological excavation of areas that are considered to be 'spaces between monuments' allowing for a better understanding and interpretation of their use and meaning.

Archaeological evaluation and sampling

The Applicant disagrees with the assertion that sampling between known heritage assets/Asset Groups is 'at a very low level'. The Scheme has been the subject of an unprecedented level of detail of investigation of the area of the WHS covered by the Scheme in accordance with an archaeological evaluation strategy developed in consultation with HMAG and with input from the Scientific Committee. This has comprised up-to-date geophysical survey of the full red line boundary, ploughzone artefact sampling across all areas

evaluated, and trial trenching, building on and augmenting the results of more than 25 years of previous investigations in connection with the A303, and taking into account the emerging results of academic research programmes undertaken over the last decade. This provides us with a robust baseline to assess the Scheme impacts and risks. The Scheme has been designed to avoid known archaeological assets wherever possible and minimise landtake within the WHS.

The approach taken to date by the Applicant, utilising a 1% gridded test-pit array which mapped the presence / absence and different kinds and scales of activity areas, was endorsed by the Scientific Committee and HMAG as part of the Archaeological Evaluation Strategy. The ploughzone sampling strategy can be found in the draft DAMS as submitted at deadline 6 [REP6-013; paragraphs 6.3.11-6.3.18] and aims to respond to the distribution of lithic material in the ploughzone so far encountered (including concentrations, transitions and blank areas), incidence of chronologically and/or typologically distinctive pieces, coincidence with sub-surface features encountered in trial trenching, and possible topographical or activity-related distributions in order to comprehensively respond to the results of the archaeological evaluation.

With regard to any uncertainty about the findings of the evaluation programme, please see the written summary of the Applicant's oral submissions ISH2, Cultural Heritage [REP4-030, pp. 2-11-13]

Sampling strategies are being developed in close consultation with Wiltshire Council, Historic England, HMAG and with inputs from the Scientific Committee and the Applicant disagrees that these are put forward at a 'very low-level'. The draft DAMS has taken on board their advice and the Applicant believes that the draft DAMS as issued at deadline 6 [REP6-13] provides a proportionate and reasonable approach that has fully considered the Scheme impacts on the archaeological resource situated within the order limits and proposes suitable mitigation in the form of preservation in situ or preservation by record as appropriate, including sub-surface features and their sampling and an intelligent and reflexive approach to ploughzone artefact sampling.

The Applicant also points out that it is incorrect for ICOMOS UK to imply that no major excavations are proposed for the western portal or its approaches

and would refer the Examining Authority to the draft DAMS [REP6-013; Appendix D; Action Area Site 24 pages 272-278].

Future research potential

The research potential of the WHS is recognised in the HIA [APP-195, para. 9.3.4-12; 9.3.75].

The application recognises the archaeological potential of the Scheme and has put forward a Detailed Archaeological Mitigation Strategy (DAMS) [REP6-013] which sets out the structured, iterative detailed archaeological mitigation strategy. The DAMS has been developed in consultation with Wiltshire Council, Historic England and the Heritage Monitoring and Advisory Group, and with inputs from the Scientific Committee. It will be finalised prior to the end of the Examination and is secured by Requirement 5 of Schedule 2 of the draft development consent order [REP6-005]. The draft DAMS is rooted in the Research Framework for the Stonehenge and Avebury and Associated Sites WHS (Leivers and Powell 2016) and a Scheme-specific Archaeological Research Agenda [REP6-013; Section 4]. A further revision of the DAMS is submitted at deadline 7.

With regard to the research potential of archaeological remains, see Highways England's comments on the Stonehenge and Avebury WHS Coordination Unit's Written Representation [REP2-139] regarding future research potential [REP3-013, paras. 24.2.39 – 40].

With regard to the speculative argument that future technology may discover more information, see Highways England's comments on the Council for British Archaeology's Written Representation regarding future research potential [REP3-013, paras. 21.4.4-7].

Future understanding of the WHS

With regard to the future understanding of the WHS, the Scheme will enable beneficial opportunities for transmission of OUV and for increasing the public's awareness, understanding and perception of the OUV of the WHS in a local, regional, national and international context. The Detailed Archaeological Mitigation Strategy (DAMS) submitted at deadline 6 [REP6-013] requires that a comprehensive publication and dissemination

		<p>programme be developed in parallel with the strategy for Public Archaeology and Community Engagement (Appendix E), to deliver a lasting legacy from the archaeological investigation and recording works undertaken for the Scheme. The publication and dissemination programme will be developed in consultation with the Heritage Monitoring and Advisory Group (HMAG) and the public archaeology strategy will link to the work of Highways England's A303 Benefits and Legacy Forum and Benefits Steering Group, which will look to work with partner organisations to develop the Scheme legacy and benefits as the Scheme develops, tying in to the priorities set out within the 2015 WHS Management Plan [REP6-013, Section 9.2, Outline Publication and Dissemination Proposals, and Appendix E, Public Archaeology and Community Engagement Strategy].</p>
31.1.6	<p>[LV 2.1 Integrity of landscape and cultural heritage]</p> <p>Integrity</p> <p>All of the above relates to integrity. The WHS as a whole should satisfy conditions of integrity as should the two individual component sites. Integrity relates to the idea of completeness and intactness of the attributes that convey OUV. As set out above, the attributes do not just relate to asset groups and assets but to the inter-relationship between them and their spatial arrangements within the overall landscape. And completeness and intactness refer to the ensemble of attributes that together convey OUV, not just to individual attributes. It is ICOMOS-UK's view that the HIA has not adequately considered integrity.</p> <p>Stonehenge was inscribed as an area or landscape⁴ not a collection of sites. Bulldozing a large cutting through the site will remove evidence for sites that clearly are part of the overall ensemble of attributes which will in turn impact highly adversely on the integrity of the overall landscape.</p>	<p>The Applicant considers that the HIA has been carried out accurately in compliance with the Guidance on Heritage Impact Assessments for Cultural World Heritage Properties adopted by the International Council on Monuments and Sites (ICOMOS 2011) and with a full appreciation and understanding of the importance of the WHS and its OUV including the Integrity, Authenticity and the Attributes that convey OUV.</p> <p>With regard to conditions of integrity, "Integrity is a measure of the completeness or intactness of the attributes that convey Outstanding Universal Value' (UNESCO, ICCROM, ICOMOS and IUCN 2011 Preparing World Heritage Nominations. World Heritage Resource Manual. 2nd ed., 65-67).</p> <p>The HIA notes that "<i>In relation to Integrity, the Operational Guidelines (UNESCO 2017; https://whc.unesco.org/en/guidelines/) state in paragraphs 88 and 89 that:</i></p> <p><i>'88. Integrity is a measure of the wholeness and intactness of the natural and / or cultural heritage and its Attributes. Examining the conditions of integrity therefore requires assessing the extent to which the property:</i></p> <ul style="list-style-type: none"> <i>• Includes all elements necessary to express its Outstanding Universal Value;</i>

- *Is of adequate size to ensure the complete representation of the features and processes which convey the property's significance;*
- *Suffers from adverse effects of development and / or neglect;*

This should be presented in a statement of integrity [within the SoOUV, see below].

89. For properties nominated under criteria (i) to (vi)3, the physical fabric of the property and / or its significant features should be in good condition, and the impact of deterioration processes controlled. A significant proportion of the elements necessary to convey the totality of the value conveyed by the property should be included. Relationships and dynamic functions present in cultural landscapes, historic towns or other living properties essential to their distinctive character should also be maintained.'

These factors are taken into account when assessing the potential impact on the Integrity of the WHS." [APP_195, paras. 5.4.12-13].

The Statement of OUV notes in respect of integrity that, 'The boundaries of the property capture the Attributes that together convey Outstanding Universal Value at Stonehenge and Avebury. They contain the major Neolithic and Bronze Age monuments that exemplify the creative genius and technological skills for which the property is inscribed. The Avebury and Stonehenge landscapes are extensive, both being around 25 square kilometres, and capture the relationship between the monuments as well as their landscape setting. [...] The survival of the Neolithic and Bronze Age monuments at both Stonehenge and Avebury is exceptional and remarkable given their age – they were built and used between around 3700 and 1600 BC. Stone and earth monuments retain their original design and materials. The timber structures have disappeared but postholes indicate their location. Monuments have been regularly maintained and repaired as necessary. The presence of busy main roads going through the World Heritage property impacts adversely on its integrity.'

The test of integrity in relation to the WHS relates to the wholeness, intactness and absence of threats to attributes that convey OUV. HIA Section 6.9, Asset Groups: baseline description and assessment of Scheme impacts

		<p>and effects and Section 6.10, Discrete and isolated assets: baseline description and assessment of Scheme impacts and effects, considers the integrity of heritage assets and the contribution of these assets to expressing the Attributes that convey the OUV of the WHS.</p> <p>In respect of intactness as an aspect of integrity, the remains that will be removed by the construction of the Scheme do not ‘make a significant contribution to the OUV of the WHS’ such that the integrity of the WHS would be diminished by the removal of these remains. The HIA sets out the impacts and effects of the Scheme on the Integrity of the WHS [APP-195, paras. 9.4.41-9.4.45 and 11.2.9-11.2.10], assessing impacts on Asset Groups, relationships between Asset Groups and the landscape, noting that there are a mixture of positive and negative changes as a result of the Scheme, including the embedded Scheme design which assists in minimising impacts on integrity, but concluding overall that <i>“it is anticipated that the Scheme would have a Negligible Positive impact on the Integrity of the WHS, resulting in a Slight Beneficial effect.”</i> [APP-195. para. 9.4.45].</p> <p>The Applicant refutes that the construction of the Scheme will involve ‘bulldozing’ archaeological remains. The Scheme includes measures to facilitate the sharing and understanding of archaeological discoveries. Archaeological remains would be carefully excavated and recorded during the preliminary works phase, in advance of the construction of the Scheme. The draft Detailed Archaeology Mitigation Strategy (DAMS) submitted at deadline 6 [REP6-013] also identifies areas to be protected in situ. The DAMS has been developed in consultation with Wiltshire Council, Historic England and the Heritage Monitoring and Advisory Group (comprising Historic England, Wiltshire Council Archaeology Service, the National Trust and English Heritage Trust) and will be finalised prior to the end of the Examination and is secured by requirement 5 of Schedule 2 of the draft Development Consent Order [REP6-005]. The project archive of reports and archaeological finds would be deposited in a local museum once the archaeological excavations have been analysed and published.</p>
31.1.7	[LV 2.1 Integrity of landscape and cultural heritage] Boundaries	Regarding a WHS buffer zone, the Applicant points to response by Historic England at the Issue Specific Hearing for Cultural Heritage on the 5 th and 6 th June [REP4-030; Agenda item 3 (v)]. At the hearing Henry Owen John of Historic England explained that:

	<p>In the 2006 Periodic Reporting⁵, the State Party acknowledged that the boundaries of the site were ‘inadequate’, that no buffer zone has been defined, and that further work was needed to define the buffer zone. In the subsequent 2013 Periodic Reporting, it was reported that the boundaries ‘could be improved’ and that ‘whilst a buffer zone is not thought to be the most effective approach, it is intended to develop a setting study to help planners and developers further understand how any future development will affect the WHS and its OUV’.</p> <p>The straight line western boundary has long been identified as being particularly inadequate as the attributes of OUV appear to extend well beyond this boundary. So far no setting study or detailed assessment has been made of the area to the west of the boundary that could inform either a new boundary or detailed protection and management of the immediate setting of the current boundary – which would be a buffer zone if one were approved.</p> <p>If there is no buffer zone, this does not remove the obligation to protect the immediate setting and indeed the wider setting for the way they both support OUV. The 2013 Periodic Reporting acknowledged (somewhat confusingly) that although ‘An adequate legal framework exists for the area surrounding the World Heritage property and the buffer zone [sic], but there are some deficiencies in its implementation which undermine the maintenance of the Outstanding Universal Value including conditions of Authenticity and / or Integrity of the property’. (Presumably the text should have referred to the immediate setting rather than the buffer zone.)</p>	<p><i>“any modification to the WHS boundary (or provision of a buffer zone) would be a lengthy and complex process; any modification to the boundary proposed as a result of the work of Wiltshire Council would then need approval by DCMS and then the World Heritage Committee.”</i></p> <p>At Agenda item 6 (ii) [REP4-030], ‘responding to comments made about assets outside the WHS boundary and a buffer zone, Chris Moore (representing the Applicant) explained that in the HIA the Applicant has taken account of assets outside the WHS that contribute to and convey attributes of OUV, such that, in accordance with ICOMOS Guidance, if a buffer zone was established the Applicant would have assessed the impact on such assets that would fall within the buffer (see also the Applicant’s response to written question CH.1.58 [REP2-025]).’</p> <p>With regard to the boundary review and setting study, further detail is provided in the Applicant’s response to Written Question CH.1.58 [REP2-025] and in the Issue Specific Hearing for Cultural Heritage on the 5th and 6th June [REP4-030; Agenda item 3 (v)].</p>
31.1.8	<p>[LV 2.1 Integrity of landscape and cultural heritage]</p> <p>Impact of scheme on the setting of the property</p> <p>The first ICOMOS Advisory mission identified the need for a landscape ‘perspective’ or approach to be adopted that continued outside the boundary of the property, particularly to its west, to reflect links between what lies inside and outside. As the role of a buffer</p>	<p>The Applicant restates that the design has been specifically chosen to limit the landtake for the construction of the Scheme both within the WHS and outside of it in order to minimise the loss of archaeological remains. In terms of landscape, the Scheme has been sensitively designed in order to integrate the Scheme into the existing landform and to remove the sight and sound of traffic from much of the WHS landscape, a key aspiration of the 2015 WHS Management Plan.</p>

zone is to support the OUV of the property, in the absence of a buffer zone, protection of the immediate setting should have a similar aim.

The HIA should have considered in detail the potential impact of the Longbarrow scheme on the immediate setting of the property in terms of impact on its support for OUV. This has not been done with the result that there is no assessment of the proposed Longbarrow junction on the OUV of the property. In ICOMOS-UK's view, had a proper assessment been undertaken, based on clear identification of the assets within the immediate setting that support the OUV of the property, a highly negative impact would almost certainly have been identified.

The Applicant has considered Scheme impacts on assets conveying attributes of OUV located beyond the present WHS boundary, detailed in the Applicant's response to Examining Authority Written Question CH.1.58 [REP2-025] and LV.2.1(vii) [REP6-030].

A Cultural Heritage Setting Assessment was undertaken [APP-218] and informed the HIA, particularly the baseline description and assessment of Scheme impacts and effects [APP-195, Section 6.9]. The cultural heritage ES [APP-044] and HIA [APP-195] were developed in close collaboration with the wider multidisciplinary environmental team, including specialists in Landscape and Visual Impact Assessment.

Regarding Attribute 6 of the OUV of the WHS, 'The disposition, physical remains and settings of the key Neolithic and Bronze Age funerary, ceremonial and other monuments and sites of the period, which together form a landscape without parallel', the HIA [APP-195] assesses a Slight Beneficial effect. The Scheme has been sensitively and carefully designed to limit impacts as far as possible, minimise intrusion and in order to integrate the Scheme into the existing landform and to remove the sight and sound of traffic from much of the WHS landscape.

The potential impacts of the Longbarrow junction element of the Scheme are detailed in the HIA, including a description of the Scheme element [APP-195, para. 7.5.5], construction programme [APP-195, para. 7.5.7] and design changes to the Scheme within the WHS in response to cultural heritage concerns [APP-195, Table 9]. The heritage assets in the vicinity of the proposed Longbarrow Junction location which support the OUV of the property are identified in HIA Section 6.9, Asset Groups conveying Attributes of OUV. The impacts and effects of the Longbarrow Junction on the setting of Asset Groups are stated in Section 6.9 and are considered on Isolated and discrete assets in Section 6.10. The effects of the new Longbarrow Junction on attributes of OUV are detailed in the Evaluation of overall impact and significance of effect of Scheme on the OUV of the WHS [APP-195, para. 11.1.26].

Please see the response to agenda item 6 (ii) in the written summaries of oral submissions put at ISH2 regarding Cultural Heritage [REP4-030] which addressed the approach to Longbarrow Junction and explains that assets

		<p>outside of the WHS that contribute to attributes that convey the OUV of the WHS were taken into account. Therefore, if a buffer zone was established or the WHS boundary extended, the Applicant would have already assessed and had regard to the impact on such assets that would fall within the buffer or extended boundary. Further detail is provided in the Applicant's response to Written Question CH.1.58 [REP2-025].</p> <p>The Applicant states that a full and proper assessment, in the form of its submitted HIA [APP-195] has been undertaken which includes a full consideration of the impacts of the proposed Longbarrow junction. See also the Applicant's Responses to the ExA's Written Questions-Landscape and Visual (LV.2.1) [REP6-030] where a full response is provided.</p>
31.1.9	<p>[LV 2.4 Tranquillity]</p> <p>ICOMOS-UK would like to comment on the connection between tranquility and the feeling of completeness of the landscape and the interconnectedness of its features in relation to authenticity.</p> <p>Authenticity relates to the ability of a site to convey its value credibly and truthfully through a variety of attributes. While a site could have the potential to convey its value through identified attributes, there may be other factors that come into play that could constrain its ability to convey its value in an optimal way. Light or the lack of it, noise, and other nuisances such as pollution, lack of access, over-visiting, and lack of safety may all hinder the way a site conveys its value.</p> <p>In the case of Stonehenge, authenticity is related to the way the site is able to evoke an extensive, integrated, prehistoric sacred landscape. The right conditions need to be in place to provide a sense of connection with the prehistoric past in order to allow for a full appreciation of the scope of the landscape as well as its inter-relatedness and sacredness. Tranquility can provide those conditions.</p>	<p>The factors that preserve or enhance, and reduce or diminish the authenticity of Asset Groups, and the contribution that these assets make to expressing the Attributes that convey the OUV of the WHS, are addressed in HIA [APP-195] Section 6.9, Asset Groups: baseline description and assessment of Scheme impacts and effects and Section 6.10, Discrete and isolated assets: baseline description and assessment of Scheme impacts and effects. Attributes of setting are described, taking into account both visual and aural elements – including key inter-relationships, monument inter-visibility, legibility of relationships, archaeological setting, anomalous and intrusive elements, severance, tranquillity and aural intrusion.</p> <p>Impacts and effects on artificial lighting visible within the WHS, including night-time lighting and ambience of the WHS are assessed [APP-195, paras. 9.3.13-19]. Impacts and effects on tourism [APP-195, paras. 9.3.29-36], changing patterns of access in the WHS [APP-195, paras. 9.3.47-55], and WHS conservation related to changes to tourism [APP-195, paras. 9.3.56-65] are assessed, as are Scheme impacts and effects on aspects of intangible cultural heritage including spiritual aspects [APP-195, paras. 9.3.68-73].</p> <p>An assessment of tranquillity is provided in ES Chapter 7 - Landscape and Visual Effects [APP-045, paras. 7.6.75-7.6.84]. This notes that "<i>Ultimately there is no true sense of remoteness or sense of isolation within the study area given the agricultural land use, transport routes and settlement patterns. However, from the field work, the tranquillity within Winterbourne Stoke and the WHS is notably impacted upon by the existing A303.</i>" [APP-045, para.</p>

In ICOMOS-UK's view while visual connections can be made across the western cutting, there is no way that the cutting can be anything other than detrimental in terms of authenticity. Traffic will have been lowered but not removed; there will be a sense of loss at what has been destroyed in the making of the cutting, while burial barrows will be left disrespectfully near to portals and motorway embankments. Above, all the necessary condition, tranquility, for full engagement with the overall prehistoric landscape will not be in place.

7.6.84]. There would be a beneficial impact to the tranquillity within the WHS above the proposed tunnel due to the visual and audible reduction in vehicles and the reversion of the existing A303 to a restricted byway. However, *"There would be an adverse impact to the tranquillity within the Scheme boundary between the western end of the Scheme and the western part of the WHS. This is due to the dual carriageway, the River Till Viaduct and the increased scale of Longbarrow Junction in comparison to the existing roundabout and A303."* [APP-045, para. 7.9.51].

The constructed Scheme will improve the visitor experience by increasing landscape tranquillity and improving the visual connectivity of the many heritage features within the WHS. At the western portal, a 200m cut-and-cover extension, or canopy, was added for improvement in landscape and visual connectivity and tranquillity within the WHS. At the eastern portal, a cut and-cover extension of 85m has been added to suit topography for improvement in landscape and visual connectivity and tranquillity within the WHS.

The Applicant has previously responded to ExA's Written Questions-Landscape and Visual (LV.2.4 part iv) [REP6-030] 'Has the connection between tranquillity and the feeling of completeness of the landscape and the interconnectedness of its features been considered?' The Applicant stated that:

'The connection between tranquillity and the feeling of completeness of the landscape and the interconnectedness of its features has been considered because it forms part of the overall assessment on the landscape value of the local landscape character areas. The methodology considers the completeness of the landscape in terms of landscape quality [APP-222, paragraph 7.2.17 item a)] and interconnectedness in terms of representativeness and association [APP-222, paragraph 7.2.17 items d) and h)].'

Regarding the impacts on the Attribute of OUV that relates to the landscape without parallel [Attribute 6], or as ICOMOS UK present it 'the extensive, integrated prehistoric sacred landscape' we would refer the Examining Authority to response to item 31.1.2 above.

Regarding the cutting being 'disrespectfully close to portals and motorway embankments', the Applicant respectfully points out that:

- the existing A303 and the A360 roads are situated directly adjacent to the AG12 Winterbourne Stoke Cross Roads Barrows;
- the existing A303 bisects a scheduled Bronze Age enclosure and bowl barrow 100m west of Longbarrow Cross Roads on Winterbourne Stoke Down;
- the existing A360 bisects the AG13 Diamond Group;
- the existing A303 truncates the scheduled Avenue;
- the existing A303 divides barrow groups and Stonehenge itself from each other in the Stonehenge Bowl and at King Barrow Ridge;
- the existing A303 truncates a number of isolated barrows adjacent to its existing alignment.

This is in contrast to the proposed Scheme which:

- removes the surface road from 3.3km of the central part of the WHS including the Stonehenge bowl and King Barrow Ridge;
- allows the reconnection of the Avenue where it is truncated by the existing A303;
- removes the existing road from immediately adjacent to the AG12 Winterbourne Stoke Crossroads Barrows and conceals it in a deep cutting 150m to the south;
- has been designed to conceal the new road infrastructure in key views between Asset Groups and isolated and discrete assets;
- removes the A360 from bisecting the AG13 Diamond Group,
- improves the setting of a number of isolated barrows that were truncated by the existing A303.

In summary, the Applicant has considered the effects of the Scheme on the Authenticity of the WHS [APP-195; paragraphs 9.4.46 – 9.4.50 and 11.2.11 – 11.2.12]. The Scheme would have a mixture of positive and negative impacts on the Authenticity of the WHS, including the removal of 3.3km of the existing surface road into a tunnel. The surface road has an existing adverse impact on the setting of the property. Both its visual and aural impacts currently disrupt the spirit and feeling of the property. "Overall, it is anticipated that the

		Scheme would have a Negligible Positive impact on the Authenticity of the WHS, resulting in a Slight Beneficial effect".
31.1.10	<p>[NS 2.7 Vibration effects on archaeology and NS 2.8 Settlement effects on archaeology]</p> <p>ICOMOS-UK would like to comment briefly on the subject of a methodology for measuring vibration and settlement to safeguard archaeological remains.</p> <p>Although there is a considerable body of literature on vibration/settlement monitoring for standing structures, there is no agreed method of monitoring buried archaeology. While the main henge monument itself, which has seen quite a few uplifts and repositioning, structurally resembles a standing building, the other recorded monuments, causeways, mounds etc. pose different challenges, and as-yet unidentified archaeological remains, raise yet further challenges. While a methodology could be developed, a key issue would be how to determine criteria to monitor against, and what level of change is acceptable for both temporary and permanent impacts of potentially damaging vibrations, both in terms of the cumulative or 'delayed' nature of potential damage (fissures, sinking, soil movements), and the possibility of their stabilisation over time.</p> <p>For most of this, we are in the realms of the unknown. The main issue thus becomes one of evaluating risk: what degree of risk would the tunnel pose in the short, medium and long terms. In addressing these questions, we attach as an Annex a short paper by structural engineer, Alan Baxter, CBE, which ICOMOS-UK fully endorses.</p>	<p>The Applicant's response is set out in Ns.2.7 & Ns 2.8 (8.37.13 - Response to the ExA's Written Questions – Noise and Vibration Effects [REP6-031]. In summary, Highways England agree that there is no standard method of vibration monitoring for heritage assets although the guidance in various British Standards is of relevance (BS 7385: 1993, BS ISO 4866:2010, and BS 5228: 2009+A1: 2014 as referenced in MW-NOI5 of the OEMP [REP6-011]). The precise details of the vibration monitoring methodology will be set out in the Noise and Vibration Management Plan required by MW-NOI3 of the Outline Environmental Management Plan (OEMP) [REP6-011]. This will include specific details in terms of the choice of transducers, method of coupling, measurement locations, measurement durations, etc.</p> <p>It is agreed there is no standard threshold for construction vibration levels significantly affecting archaeological earthworks, such as burial mounds, and buried assets, due to the unique and varying sensitivity of such assets. Therefore, heritage assets, including archaeology will be considered on a case by case basis based on the final detailed design, tunnelling methodology and individual asset sensitivity to determine the risk of significant effects, the need for monitoring and actions to control or mitigate impacts. Amendments made to the OEMP at deadline 6 [REP6-011] ensure this would be done in consultation with members of HMAG (MW-NOI5).</p> <p>It is agreed that there is no standard threshold or assessment for tunnelling induced settlement levels affecting archaeological earthworks, such as burial mounds and buried assets, due to the unique and varying sensitivity of such assets. The impact has therefore been assessed by reference to the geotechnical stability of the earthwork following a more conventional approach comparable with tunnelling through a railway embankment which is extremely sensitive to ground movement. In accordance with the Detailed Archaeological Mitigation Strategy and the OEMP (MW-G7 and MW-CH8) [REP6-011], the main works contractor will develop a Ground Movement Monitoring Strategy (GMMS) to be approved by Highways England prior to tunnelling works commencing. The GMMS will identify heritage assets that</p>

are at risk of ground surface movement caused by settlement and as part of the strategy the contractor shall develop contingencies and identify measures to ensure the protection of the assets.

31.2	Additional Submission received at Deadline 6	
	Matter Raised	Highways England's Response
31.2.1	<p>The issue of vibration effects on archaeology cannot be separated from the wider issues of how we consider one of the greatest and oldest areas of archaeology in Britain, and in Europe too.</p> <p>Of course we relate strongly to the visible standing stones but it is the meaning and use of the much wider landscape which gives it such special significance. And we do not know enough about it, in fact we know for sure very little about it.</p> <p>The colossal scale proposed of the construction process of the tunnel and the cuttings and retaining walls is in the act of building a major imposition on the landscape that leaves a complex legacy however much of it is mitigated. It is like a serious multiple organ transplant in a human.</p> <p>Our current knowledge of the impact of vibration on standing structures of various ages is reasonable, or so we think in this generation. Generally the sheer mass of most archaeological or historic structures is impervious to vibrations from boring tunnels to the running of vehicles or railways. Humans and even more so some animals have a far more perceptive awareness of vibrations than heavy physical masonry. Driven piling though can be seriously damaging. Settlement caused by problems that can emerge in the act of tunnelling can also be onerous. However the engineering</p>	<p>It is agreed that most archaeological or historic structures are impervious to vibration from tunnel boring and road traffic. Humans can perceive vibration at much lower levels than would be a risk of causing damage.</p> <p>We would agree that the 'engineering science of tunnelling has progressed rapidly in the last two decades but still carries risk' that can be mitigated through the risk management process that has been implemented during the development of the preliminary design and will be continued by the contractor during the course of the detailed design and construction of the project. There are well-established means of dealing with excavation induced ground movement including grouting from the tunnel horizon that can be implemented in conjunction with the Ground Movement Monitoring Strategy (GMMS), which is secured in the OEMP.</p>

	science of tunnelling has progressed rapidly in the last two decades but still carries risks.	
31.2.2	<p>The real concerns about this colossal civil engineering project though are about the secondary impacts from vibrations on natural drainage patterns and ecology in the longer term.</p> <p>The examples in my wide experience of where vibration has directly caused damage to standing structures are where for instance heavy traffic passing close to loose jointed and filled rubble walls has caused slow erosion of smaller particles. Also an unusual case was where the main AIS with heavy vehicles used to pass close to Lincoln Cathedral Chapter House which was partly founded on a backfilled Roman ditch and traffic vibration caused settlement of the fill with resulting structural damage. (The road has now been diverted.)</p> <p>There can however be secondary effects from the impact of tunnelling including from vibration and major construction altering the nature of the subsoil and drainage patterns.</p> <p>Human activity in tunnelling and other major civil engineering projects has always been without much long term regard for future generations. Coal mining was of course the worst example and destroyed buildings and archaeology from the later physical collapse of the mine workings. There is even an example of a disused railway tunnel collapsing unexpectedly and causing a building above to collapse. We have little awareness of how to think about the very long term of civil engineering and its safety.</p>	<p>The references to secondary impacts at the Lincoln Cathedral Chapter House and at St. Stephens' Chapel are indeed salutary lessons for engineers and are situations that are better understood today and considered as part of the design process. Indeed, the Victorian Engineers responsible for the cut and cover construction of the District Line in 1869 were possibly more directly concerned with the immediate transportation improvements rather than the preservation of the archaeology or the wider environmental impact of the works. Clearly, they did not have the benefit of the same team of experts in the respective fields of engineering, hydrogeology and archaeology to advise them of the potential dewatering impacts at shallow depths from poorly designed and consolidated backfill. It is helpful to note that recent excavations (2016) at St Stephens' Chapel have unearthed remnants of old walls including their timber revetment in a good state of preservation following centuries of burial in wet ground.¹ The collapse of historical and redundant coal mines and disused railway tunnels is another lesson learned in terms of emphasising the importance of the design and integrity of the tunnel lining system supported by an on-going commitment of the asset owner to regular inspection and maintenance during the lifetime of the tunnel.</p> <p>In relation to the potential vibration impacts on the sub-soil in terms of 'densification', saturated silts and sands below the water table are known to exhibit this behaviour, but these materials are not present on site within the influence of the tunnelling and are not known to exist within the Chalk. Settlement due to the relaxation of ground contributing to volume loss around the tunnel has therefore been considered as the most relevant method by which settlement can occur as a consequence of tunnelling; this has been reviewed as established practice.</p> <p>¹ https://www.virtualststephens.org.uk/blog Tudor Thames Embankment uncovered in Palace of Westminster excavations: Dr Mark Collins, 13th May 2016</p>

31.2.3	<p>Although the visible standing stones at Stonehenge are unlikely to be affected by vibration from construction or traffic as we now know it, the wider landscape is far less determinable. We know little about the much more fragile aspects of this wide site and the impact of the tunnel in the much longer term and even its long term maintenance and use. What will be there from Stonehenge's origin if ever discovered will be immensely fragile.</p> <p>Because as Engineers in each generation we become more technically competent (or we think so) it does not mean we know enough, hence the serious damage from new roads to historic towns in the 1970's. Stonehenge is from about 400 generations ago, not just 2 or 3, and is of the greatest cultural significance. We must be aware of our technical limitations. We do not know, and maybe never will, enough</p>	<p>Highways England welcome the acknowledgement that the stones at Stonehenge are unlikely to be affected by the tunnelling works. With regards to heritage assets and archaeological remains above the tunnel in the wider landscape, Highways England do not agree that the identified barrows along the route of the tunnel that could be subject to vibration effects are more fragile. As discussed at the Issue Specific Hearings and as reported in the written summary of oral submissions [REP4-033] 6 iii, these barrows have already been excavated, either completely or in part, and backfilled removing potentially sensitive burials and artefacts. The identified barrows are unlikely to contain voids and have settled to their current position over approx. 5000 years. In addition, disturbance from previous/current activities including World War One airfield operations, agricultural ploughing and/or animal burrowing has occurred. With regard to individual artefacts in the soil these are usually fragmented and are supported by the soil matrix, not surrounded by voids and therefore are much less sensitive to vibration than artefacts in the open air, or with voids around them.</p> <p>As required by MW-NOI5 the main works contractor shall identify, in consultation with the members of HMAG, any potentially vibration sensitive cultural heritage assets that are at risk from ground vibration from the tunnel. Should assets be identified actions to control or mitigate impacts (including monitoring) shall be agreed in consultation with the members of HMAG.</p> <p>With regards to impacts in the longer term, operational ground-borne vibration impacts were scoped out of the assessment. This was detailed in Table 9.2 of Chapter 9 of the ES [APP-047]. DMRB identifies that the potential for significant ground-borne vibrations due to road traffic is limited to locations close to heavily trafficked roads with a poor road surface. The A303 Amesbury to Berwick Down Scheme will be constructed with a new smooth surface and, in line with standard Highways England maintenance regimes, will undergo regular routine maintenance to ensure the quality of the surface is maintained over time.</p> <p>With regards any long-term impacts from settlement, the measures used during tunnelling with a modern closed-face TBM (as secured in item D-CH32 of the OEMP [REP6-011]) to install a lining system to provide long-term support to the ground and utilising ground stabilisation techniques as</p>
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	necessary during construction (as secured under items MW-CH1 & MW-CH8 of the OEMP) are considered as sufficient to prevent this from occurring.
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32 King Arthur Pendragon (REP6-077)

32.1	Response to ExAs Second round of Written Questions (Ns.2.9)	
	Matter Raised	Highways England's Response
32.1.1	<p>I do NOT consider any increase in noise will improve the current situation or improve the tranquillity of the WHS, especially due to the close proximity of the proposed Western portal to the many 'burial mounds' which are used for 'quiet contemplation'.</p> <p>As I pointed out at an 'Oral Hearing' I believe, with the changing fuel system, more vehicles going over to electric, and the increased speed of traffic entering and emerging from a duelled tunnel it is liable to change in tone from a dull hum to a high pitched whine, making 'quiet contemplation' much harder in and around the Burial mounds to the West.</p>	<p>Increases in traffic noise levels within the WHS are limited to locations to the east and west of the proposed tunnel where the Scheme is on a different alignment to the existing A303. Traffic noise levels are predicted to reduce across a large area of the WHS primarily due to the tunnel. The extent of the adverse impacts of the realignment of the A303 has been minimised by locating the new A303 mainline in a deep cutting, compared to the existing A303 at surface level. Tunnel portals can be a source of additional noise, therefore, as discussed at the Issue Specific Hearings and reported in the written summary of oral submissions [REP4-033] 4iii, mitigation has been incorporated into the Scheme design in the form of a noise absorbent finish at the entrances/exits of the tunnel, as secured by D-NOI6 of the OEMP [REP6-011].</p> <p>A response to the query raised at ISH5 regarding electric vehicles was provided in the written summary of oral submissions [REP4-033] Agenda item 5i. This concluded that on the basis of forecasts of electric vehicle usage, and the potential magnitude of the difference in overall vehicle noise levels emitted by electric vehicles, the increased uptake of electric vehicles in the future is anticipated to have a small beneficial effect on traffic noise levels where traffic speeds are low and therefore engine noise is dominant. Additionally, the character of electric vehicle noise has the potential to be different from conventional vehicle noise. Research on the subjective response to various fleet mixes ranging from 0% electric vehicles to 100% electric vehicles suggests that a widespread transition from conventional to electric vehicles on national roads would not harm the subjective experience of people near those roads, and indeed would likely improve that experience. Such effects are not considered to change the overall conclusions of the road traffic noise assessment of the Scheme as reported in the Environmental Statement.</p>

33 Lincoln College (REP6-056)

33.1	Response to ExA's second round of written questions	
	Matter Raised	Highways England's Response
33.1.1	<p>[In response to CA.2.55]</p> <p>REP3-013, item 38.1.3 (New Access)</p> <p>The land the proposed new access would cross is owned by the MoD. Compulsory purchase powers cannot be used against the MoD and therefore provision of a new access is entirely in their gift. Thus far, Highways England (HE)'s negotiations with the MoD do not appear to have reached a firm conclusion and HE can only offer vague indications that the MoD representatives they are dealing with have no objections to the proposal. I would need a binding agreement to be produced (ideally a Deed of Grant for a right of way) before I would be prepared to raise this objection on behalf of our client.</p>	<p>See response to item 13.1 of 8.35 - Written summaries of oral submissions made at the Compulsory Acquisition Hearing held on 9 and 10 July 2019 [REP5-002]. The submissions made respect of the Applicant's update on Crown Land matters explained as follows:</p> <p>"Mr Richard Turney provided an update regarding the two types of Crown land included in the draft Order limits. The first comprises interests in land held by the Secretary of State for Defence. Consent has been obtained in respect of land in which the Secretary of State has a freehold interest; however, consent has not yet been obtained in respect of the plots in which the Secretary of State for Defence has the benefit of rights only. Highways England is liaising with the Ministry of Defence in respect of the outstanding consent needed and further updates will be provided to the ExA as progress is made."</p> <p>The Applicant's ongoing submissions to the Examining Authority will confirm the position in relation to consent, from the appropriate Crown authority, to the use of the land in question for the purposes of the Scheme, in accordance with the provisions of section 135 of the Planning Act 2008. The draft DCO itself includes drafting (see article 38 in the version submitted at deadline 6 [REP6-006]) which provides that the use of any Crown land (which includes land owned by the Secretary of State for Defence) is only authorised where the relevant government department has given its written consent to the use of that land for the purposes of the development authorised by the Order.</p>

33.1.2	The DCO application also includes no fall-back position in the event that the MoD were not agreeable to a new access.	As outlined above the Applicant has obtained Crown land consent from the Secretary of State for Defence, which is the appropriate Crown authority capable of granting such consent in respect of freeholder interests in land owned by the Secretary of State for Defence (and which covers the land required for this new access). Therefore, the Applicant will be able to use the powers requested as part of the DCO to secure this new access.
33.1.3	A new highway access from Amesbury Road to the west of the land has been discussed, but I am unclear if it would require planning permission and HE does not appear to have investigated that alternative.	The Applicant proposes to make changes to its application for development consent. The new highway access to Earls Farm Down from Amesbury Road is included amongst these changes under reference NMC-07. The Applicant is currently carrying out a public consultation on the proposed changes. In due course the Examining Authority will make a procedural decision on whether or not to accept the proposed changes. The Applicant is of the clear view that the proposed changes are non-material and are appropriate for inclusion in the development consent order. If accepted, the new access would be included in the development consent order and so would not require any further statutory consents such as planning permission.
33.1.4	No provision is made for a new highway access in the DCO drawings.	Both "before" and "after" extracts of the plans are included in the Applicant's non-material changes request, submitted to the Examining Authority on 5 August 2019, and in the Applicant's Proposed Changes Consultation Report, available on Highways England's website for the Scheme. If the proposed changes are accepted by the Examining Authority, the revised plans would be substituted.
33.1.5	REP3-013, item 38.2.3 (Substation) In this paragraph HE has made vague indications of which sub-station is likely to be needed and where the supply cable would run. Unfortunately, no further progress has been made to date.	The Applicant's answer to the Examining Authority's Second Written Question CA 2.56 [REP6-026], at paragraphs 1-3 and 6, responds to this issue. It states: By way of preliminary discussions, Scottish and Southern Energy (SSE) has indicated that only the Ratfyn substation is likely to be required for the A303 works. Therefore, it is unlikely that any works will be required on land in plots: 09-30, 09-31, 09-36, 09-37, 09-38 and 09-40 on the Land Plans [APP-005], although this position has not yet been formally confirmed. SSE has also

indicated that all necessary works at the Ratfyn substation may potentially be carried out within the current substation footprint. This may reduce the requirements for permanent acquisition at plots 09-43 and 10-01; however, the position is not yet confirmed.

SSE has further indicated that the proposed cable route would run southwards down the Ratfyn Track until bordering the A303 where it would then connect through into land owned by Highways England. The rights sought could be provided in the form of a legal easement; however, this has yet to be confirmed, as with the final residing right. The proposed alternative east of the narrow section of Ratfyn track is proposed to be discussed between Highways England and SSE, once there is formal agreement between SSE and Highways England for the design of this supply.

Until the scope of the required works is confirmed by SSE through this design it is necessary and appropriate for Highways England to continue to seek compulsory acquisition powers to safeguard the delivery of the Scheme. However, Highways England will not use these powers if they are not needed for the scheme or if an easement (or a wayleave) can be agreed between parties.

The scope of Scottish and Southern Electricity plc supply works is likely to be confirmed by the end of September 2019. However, the scope defined at this time will be based on SSE's preferred route which is likely to be southwards down the Ratfyn Track. The scope would therefore exclude any consideration of alternative option(s) for routes, such as the proposed alternative east of the narrow section of Ratfyn track.

Ongoing discussions and correspondence between the Applicant and this Affected Person have been taking place since the Compulsory Acquisition Hearings. These are recorded in the updated Land Acquisition and Temporary Possession Negotiations Schedule - Tracked Changes version [REP6-017], on page 52.

34 Max and Helen Hosier (REP6-072)

34.1	Response to ExA's Second Round of Written Questions	
	Matter Raised	Highways England's Response
34.1.1	<p>[In response to CA.2.44]</p> <p>As stated in previous written responses, we do not believe that the land for ecological mitigation around the western portal and the carriageway approach needs to be compulsory acquired by the Applicant. This was stated by our Agent at the Compulsory Acquisition Hearing. As the area is for ecological mitigation and not for the hard infrastructure of the Scheme, we believe that the land can remain in our ownership, however, we would enter into a management agreement with the Applicant to manage the land in the way that they decide. For this reason we have a great interest in how this area is to be managed and for what purpose. The Scheme is billed for ecological and biodiversity benefits so we feel that this needs to be in harmony with the other biodiversity focuses that are already on the landscape within the vicinity of the Scheme.</p> <p>A management agreement would be a legally binding agreement and would save on the requirement for compulsory purchase of the land for ecological mitigation.</p>	<p>Please see response items 40.1.7 and 40.1.8 in the Applicant's document 8.18 Comments on Written Representations at deadline 3 [REP3-013], which states:</p> <p>The land identified for permanent acquisition around the tunnel has been reduced to the minimum required in order to construct, operate and maintain the tunnel. It does, however, include a Limit of Deviation, within which the tunnel will be located following detailed design. Highways England will only acquire that land that is identified as required for permanent acquisition once the final detailed design is confirmed. With reference to the Environmental Masterplan [APP-059], some land has been identified for essential mitigation around the tunnel to enable the portals to be set below ground levels or replicate ground levels as far as practicable and integrate the approach to the portals for landscape and visual integration, in combination with areas of new species rich chalk grassland for nature conservation and biodiversity.</p> <p>The approach to integrating the new road into the existing landscape is set out in the Design and Access Statement [APP-295]. As secured by paragraph 8 of Schedule 2 to the draft Development Consent Order (DCO) [REP6-005], the appointed contractor will be required to develop a landscaping scheme which is based on the landscaping approach set out in the DCO. This approach includes the provision of bunds and false cuttings, with sympathetic regrading of earthworks to match the existing natural rolling landform, along with planting of trees, where appropriate to the landscape character, hedgerow, shrub and extensive chalk grassland areas. The approach is described in the Environmental Statement (ES) Chapter 7, Landscape and Visual [APP-045] section 7.8, Design, Mitigation and Enhancement Measures and is shown indicatively on the Environmental Masterplan in Appendix 2.1 of the ES [APP-059]. Responsibility for subsequent land management is a</p>

		<p>matter which Highways England is willing to discuss with relevant landowners with a view to reaching agreements that would avoid the need to exercise powers of compulsory acquisition. However, until such agreements are concluded it remains necessary for Highways England to seek the full powers of acquisition necessary to secure the delivery of mitigation essential to the delivery of the Scheme.</p>
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35 Mr F W G Whiting (REP6-081)

35.1	Response to ExAs Second Round of Written Questions	
	Matter Raised	Highways England's Response
35.1.1	<p>[In response to CA2.57]</p> <p>My client is on annual leave returning on August 1 and unable to answer your question by the Deadline 6. He will answer this upon his return however in connection with CA2.57 ii my client and I have been advised that any work required to the Esso Pipeline will be undertaken by Esso and not involve Highways England and there has been no opportunity of discussing the proposal with the applicant due to my client being on leave.</p>	Noted, thank you for your comment

36 Mrs J Sebborn and Mr R Sebborn (REP6-080)

36.1	Responses to the ExA's Second Round of Written Questions	
	Matter Raised	Highways England's Response
36.1.1	<p>[In response to De 2.4.]</p> <p>You have asked whether or not consultation should take place on the Countess Flyover.</p> <p>As you will be aware a question was raised at the first issue specific about the lack of consultation with Highways England about the scheme given that Bowles Hatch will be impacted by the construction and permanent use post construction as it will be within 75metres of the raised section of the flyover.</p> <p>Although there is no official land take and the claim will be a part 1 claim my clients believe there should be a consultation about the Countess Flyover. At a meeting held on 31st May Highways England stated and it is minuted as such that Richard Hammond can put together a visual for the property to show where the structure will lie. Once there is a visual and more detail this will determine how the family will be affected. It is now almost two months and no visual has been presented. This once again demonstrates the very ineffective way the scheme is being handled by the Applicant.</p> <p>A consultation on the Countess Flyover would hopefully encourage the Applicant to produce not only this visual but visuals from all angles so the public and yourselves can see for themselves the impact that the Countess Flyover will have.</p>	<p>Section 4.5.4 (b) of the OEMP submitted at deadline 6 [REP6-011] has been updated to include obligations relating to external appearance of the flyover at Countess junction, providing for consultation with the Stakeholder Design Consultation Group (SDGC) on this element of the Scheme design.</p> <p>In terms of the visualisation, this will be undertaken by Highways England with the intention to submit at deadline 8.</p>

37 Rollo Maughfling (REP6-074)

37.1	Response to the ExA's Second Round of Written Questions	
	Matter Raised	Highways England's Response
37.1.1	<p>[In response to Ns.2.9]</p> <p>Do I, and those whom I represent, consider that this shows an improvement over the current situation, and will improve the tranquillity of the WHS, thus improving the opportunity for quiet contemplation/enjoyment of the landscape?</p> <p>No. I do not. The reason being that the studies presented, (Fig 9.4 and 2026 Do Something Noise Levels), are only at best, "guesstimates". They show what might reasonably be assumed to be proper "calculations", about the effect of the new scheme.</p> <p>However they do not take into account two factors which will undoubtedly make a considerable difference, particularly in relation to the proposed western portal, i.e. topography, and wind direction.</p> <p>Whereas the eastern portal, on the Amesbury side of the WHS, will be situated well below the brow of the hill, so that the noise generated by entry and exit, will, to all intents and purposes, fall back upon the Amesbury side of the King's Barrow ridge, rather than the Stonehenge side, the western portal situation is completely different.</p> <p>To the West of Stonehenge, there is only a very slight and gradual rise towards the monument from Longbarrow crossroads, thus, whilst not quite visible from Stonehenge, nevertheless there is almost no natural barrier preventing entry and exit traffic noise from the western portal traversing the entire landscape.</p>	<p>To confirm, the traffic noise level predictions do take into account both topography and wind direction, as well as changes in traffic conditions due to the Scheme. As discussed at the Issue Specific Hearings and reported in the written summary of oral submissions [REP4-033] item 4i the predictions are completed using software which incorporates 3D ground height data, therefore the effect of topography on the propagation of noise is included in the predictions. With regard to wind direction, as discussed at the Issue Specific Hearings and reported in the written summary of oral submissions [REP4-033] item 4 iii, the traffic noise prediction methodology is based on moderately adverse wind velocities and directions i.e. it assumes the wind is blowing from the source (the road) to the receptor under consideration (such as an observer at Stonehenge).</p> <p>To the west of the tunnel the new A303 mainline would be in a deep cutting, compared to the existing A303 at surface level. Tunnel portals can be a source of additional noise, therefore, as discussed at the Issue Specific Hearings and reported in the written summary of oral submissions [REP4-033] item 4iii, mitigation has been incorporated into the Scheme design in the form of a noise absorbent finish at the entrances/exits of the tunnel, as secured by D-NOI6 of the OEMP [REP6-011].</p> <p>As reported in the Environmental Statement [APP-045] and discussed at the Landscape and Visual Issue Specific Hearing [REP4-031], the landscape assessment set out that there would be beneficial impacts in terms of tranquillity to the World Heritage Site due to the tunnel, visual and audio reduction of vehicles, and the change of the existing A303 to a restricted byway. The Applicant confirmed that in this respect the proposed Scheme responds positively to stated issues within the World Heritage Site</p>

		Management Plan (2015), particularly paragraph 11.1.4 where it states: “the road and traffic represent visual and aural intrusion and have a major impact on the tranquillity of the World Heritage Site.”
37.1.2	... Add to that a light south-westerly, common to Stonehenge, and suddenly traffic at high speed on a four track dual carriageway is not just impacting nearby archaeology/monuments/places of cultural/spiritual significance, it is directly impacting on Stonehenge itself.	The traffic noise predictions, which include consideration of the wind blowing from the source to the receptor, indicate a significant reduction in road traffic noise levels at Stonehenge with the Scheme in operation, as illustrated on Figure 9.4 of the Environmental Statement [APP-167].
37.1.3	...the biggest noise impact of the A303, is not the section that runs in a slight dip alongside the monument, but the traffic coming down from King’s Barrow ridge, which will be in a tunnel, and the traffic coming from Longbarrow crossroads, which will not.	The proposed A303 mainline at Longbarrow junction would be in a cutting below existing ground levels, which would minimise the propagation of traffic noise from the mainline, compared to the existing A303 mainline which is at surface level. In addition, Green Bridge No. 3, which links to the two proposed dumbbell roundabouts at Longbarrow junction would be 1 metre below existing ground levels and bordered by earth bunds, as secured by D-CH1 in the Outline Environmental Management Plan (OEMP) [REP6-011], which will minimise traffic noise from the bridge.
37.1.4	...It is the addition of a further section of tunnel to the west, which will make the difference between an acceptable solution, and a total disaster, one which will bring opposition to the scheme from all sections of the community, not least the road protesters. Has the cost of such considerable opposition been factored into the proposal?	See response to Written Question AL.1.29 in [REP2-024] with respect to the consideration of a longer tunnel to the west. Whilst the specific costs of dealing with opposition have not been calculated for alternate schemes, the consideration of alternate schemes (and the Scheme itself) has taken into account a range of factors and impacts. Such opposition would be considered as part of the consenting process for any alternative scheme (and the Scheme itself), and all options assume such consenting process would be required.
37.1.5	There are now an estimated quarter of a million pagans in this country alone, all of whom regard Stonehenge and the Stonehenge landscape as their spiritual "home", and will not take kindly to what they may therefore see as deliberate "vandalism" by Highways England, in situating a tunnel portal so close to Stonehenge itself, and slap bang in the middle of the World Heritage Site and all it's	The traffic noise predictions, which include consideration of changes in traffic conditions due to the Scheme, the wind blowing from the source to the receptor, topography and noise from the tunnel portals, indicates a significant reduction in road traffic noise levels at Stonehenge with the Scheme in operation, as illustrated on Figure 9.4 of the Environmental Statement [APP-167].

other archaeology/monuments/places of cultural/spiritual significance.

As I said at the oral hearing of 22/5/2019, the threat of intensified noise and light pollution from a western portal situated so close to Stonehenge itself, and right in the middle of the World Heritage Site, is a conservation nightmare which I cannot strongly enough advise the Planning Inspectorate to avoid.

The western portal is not situated 'so close' to Stonehenge, it is situated on the opposite side of a ridgeline approximately 1.28 kilometres to the south-west of the Stones and as such there would be no inter-visibility between the Stones and western portal.

Please also see paragraphs 3.3.2.3 and 3.3.2.4 of the Applicant's Written summaries of oral submissions put at Open Floor Hearings held on 22 and 23 May 2019 [REP3-012], which address the points about noise and light pollution.

38 Suzanne Keene (REP6-073)

38.1	Response to ExA's Second Round of Written Questions	
	Matter Raised	Highways England's Response
38.1.1	<p>Question Lv.2.4 ii. Have attempts been made to map projected tranquillity with the Scheme in place?</p> <p>Any mapping exercise intending to show the results of the completed scheme must show the effects for the whole site as well as Stonehenge itself and take account of increased visitor numbers requested by the Public Accounts Committee (see also Question Lv.2.4, below). It must also be realistic and truthful. For instance will a further car park extension be required? I hope the Inspectors will note the shocking accounts of promises versus the actual outcomes provided in Kate Freeman's evidence (REP3-069).</p>	<p>Please see response to Written Question LV. 2.4 ii. in the responses to the ExA's Written Questions regarding Landscape and Visual [REP6-030] which explains that mapping of the projected tranquillity with the Scheme in place has not been undertaken. This is because the assessment on the change to tranquillity has been covered by the written narrative of the impacts to the local landscape character areas [APP-227].</p>
38.1.2	<p>iv. Has the connection between tranquillity and the feeling of completeness of the landscape and the interconnectedness of its features been considered?</p> <p>If this has been considered, that has been only to dismiss its importance. The UNESCO Statement of Universal Value says of the site: "including settlements, burial grounds, and large constructions of earth and stone. Today, together with their settings, they form landscapes without parallel." (my italics: from UNESCO Statement of Outstanding Universal Value). This means all monuments not only the Stones. 31% (737) of the 2,370 Relevant Representations mentioned landscape, a very few supporting the plan. For just two of these hundreds of examples, PM Scrayfield: "Stonehenge itself is unique, not only within the UK, but unique in world-wide terms. Further, the monument itself does not stand alone but can only be truly understood in its context as the hub of a vast 'ritual landscape'. ..." Rebecca Cave: "... the entire scheme is an assault on an ancient</p>	<p>The Applicant respectfully responds that none of the assessment work on tranquillity has been undertaken with a view to 'dismiss its importance.' The assessment on tranquillity is set out within the Landscape and Visual Impact Assessment [APP-045] for the construction and operation stages of the Scheme and the assessment of local landscape character areas.</p> <p>Please see response to Written Question LV. 2.4 iv. in the responses to the ExA's Written Questions regarding Landscape and Visual [REP6-030] which explains that the connection between tranquillity and the feeling of completeness of the landscape and the interconnectedness of its features has been considered because it forms part of the overall assessment on the landscape value of the local landscape character areas. The methodology considers the completeness of the landscape in terms of landscape quality [APP-222, paragraph 7.2.17 item a)] and interconnectedness in terms of representativeness and association [APP-222, paragraph 7.2.17 items d) and h)].</p>

	<p>sacred area. ... wilful vandalism of one of the key sites in Britain and I believe would signal the beginning of the end of what Britain has to offer culturally to the world." (There are many, many other relevant quotations.)</p> <p>Highways England's Environmental Statement on Astronomy and Archaeoastronomy demonstrates the intricate interconnections between the monuments¹. The completeness and interconnectedness of the landscape is fundamental to its sense of place. Ironically in view of current support for the scheme, in 2009 English Heritage conducted a research project and gave much publicity to the importance of sense of place².</p>	
38.1.3	<p>Question Lv.2.4 Tranquillity The issue of tranquillity appears to remain in dispute in that the visitors to the WHS and particularly the Stones would appear to influence the degree of tranquillity at the Stones and in the vicinity of the Stones.</p> <p>As a consequence, the degree of effect from the current road is arguably reduced and the degree of benefit from its removal in respect of tranquillity in the area of the Stones may be regarded as less significant. Do you consider that tranquillity will be achieved at the Stones as a consequence of the scheme?</p> <p>No, it will not. Relevant to this question is the request by the Public Accounts Committee, who have asked how the cultural value expressed in the Contingent Valuation Survey will be realised in the scheme and what measures will be taken to increase visitor numbers and access (although the CVS is a notional means of monetising aspects of the scheme, not intended to result in realisable improvements.)³ The Committee requests a report within three months (i.e. by mid September) on "innovative schemes to encourage people to visit the site and the surrounding areas" (p. 6) and to "encourage as many people as possible to the World Heritage Site". The Department replied that the design of the site would make it a "much more usable piece of public space" (para. 21). It is of great concern that the Department for Transport thinks of one of the world's premier World Heritage Sites as no more than a "usable</p>	<p>To claim that the removal of the busy road as part of the Scheme, which as demonstrated by the visual assessment undertaken for the Scheme is currently visible to a greater degree than suggested in the representation as 'relatively unobtrusive', will not result in an improvement in tranquillity at the Stones and throughout the WHS is to argue in the face of the clear facts, and the evidence provided to back it up in the application and submissions to the examination by the Applicant.</p> <p>Please see response to Written Question NS.2.1 in the responses to the EXA's Written Questions regarding Noise and Vibration Effects [REP6-031] which explains that with regard to the Stones, and their immediate vicinity, it is agreed that visitors are an important noise source which would have an impact in terms of the level of tranquillity experienced at this location. As a result, the improvement in tranquillity due to the major reduction in traffic noise at the Stones and in their immediate vicinity as a result of traffic using the existing A303 being redirected into the tunnel, will be less than at locations in the wider WHS where traffic noise from the A303 is dominant. Nevertheless, the major reduction in road traffic noise, combined with the removal of the sight of road traffic due to the tunnel (given that tranquillity levels are based on not just noise, but other factors such as landscape and visual impacts), cannot have anything other than a beneficial effect on tranquillity at the Stones and their immediate vicinity.</p> <p>The representation asserts that based on submissions about impacts at Avebury, it can be assumed there would be an adverse effect on tranquillity at</p>

piece of public space”. As Interested Parties have observed (for instance Kate Freeman, REP2-190) the monument on the opposite side from the relatively unobtrusive A303 is already noisy and busy, with a constant flow of traffic from shuttle buses and other transport and crowds of visitors accessing the site.

Evidence has been submitted about the effects of large numbers of visitors at the Avebury WHS with great concern about any increase in numbers (the Avebury Society, REP2-057, REP4-046; Avebury Parish Council, REP2-056, REP4-096). The effects on Avebury offer hard evidence of the predictable effects of increasing visitor numbers to Stonehenge, where already the car park has been enlarged despite objections because of heritage damage. Therefore it is clear that the scheme would absolutely not achieve one of its claimed prime objectives and confer greater tranquillity on the site; quite the reverse, it will result in it becoming busier and far more difficult to appreciate for its World Heritage qualities.

the Stones. Comments in relation to the impact of tourists at Avebury have been responded to previously: see Applicant’s Comments on any further information received at deadline 4 [REP5-003] where it has responded to the comments made by the Avebury Society [REP4-046] at items 10.1.1 and 10.1.6 and to the comments of Avebury Parish Council [REP4-069] at item 35.1.1. Those submissions do not demonstrate that improved tranquillity would not still be achieved at the Stones even with greater visitor numbers.

39 Lois Lloyd (REP6-082)

39.1	Response to the ExA's second round of written questions	
	Matter Raised	Highways England's Response
39.1.1	<p>[In response to Ns.2.9]</p> <p>We can only address how the whole scheme will affect our tranquillity and not just in relation to a few decibels here or there but respectfully ask the ExA to take into account for the purposes of protecting the monument, for equitable access and as stewards of our sacred temple, we are against approval of the scheme in its entirety.</p> <p>Therefore, our lack of tranquillity will be compounded by on the one hand losing surface traffic which will trigger a TRO on all BOATs decimating equitable access and the other hand losing the free iconic view! How can that be a tranquil option aiding quiet contemplation when many cannot get even there under the proposed remits? Salisbury bypass and the A303 left for local usage and BOATs left ungated with full public amenity in place, would improve tranquillity and equitable access for many.</p> <p>1 Tranquillity</p> <p>We can all describe what we subjectively consider is tranquillity. We may recourse to poetic and emotional descriptions which some may find inadequate in the face of technical and scientific assessment but it is encouraging that the UK Government agrees the concept needs description regarding planning and building projects and I quote a few below:</p> <p>1. Natural England Guidance for assessing landscapes for designation [AONB or National Park] indicates the criteria to be</p>	<p>The Applicant's understanding of the first part of the response is that there is a concern about a reduction or lack of access to the WHS and The Stones; however, the proposed Scheme will continue to enable access, with the proposed A303 connecting to the A360 via Longbarrow junction. Vehicular use of BOAT 12 is being maintained and the BOAT will not be gated. The proposed Scheme will improve non-motorised access via the reversion of the existing A303 to a restricted byway as well as pedestrian access across the whole scheme, between Winterbourne Stoke and Amesbury. The free view of the Stones would not be lost, being available from the restricted byway created along the line of the existing A303, from Byway 12 and from the permissive access National Trust land immediately to the north east of the Stones. This was discussed at the Issue Specific Hearings and reported in the written summary of oral submissions [REP4-033].</p> <p>The Applicant does not agree that a Salisbury bypass, the A303 left in place and the BOATs left ungated would improve tranquillity, as vehicles would be in close proximity to the Stones, and across a wider extent of the landscape.</p> <p>2 Tranquillity</p> <p>The various definitions of tranquillity provided are noted and do not contradict the approach taken by Highways England as reported in Chapter 7 Landscape and Visual of the Environmental Statement [APP-045].</p> <p>The Applicant agrees that tranquillity is ultimately a personal judgement, regardless of the various definitions.</p>

	<p>considered to encourage public access into areas having '<u>relative tranquillity and relative wildness</u>'</p> <p>"Table 4 Factors related to Opportunities for Open-Air Recreation in National Parks</p> <p>The area must be able to deliver a markedly superior recreational experience. This is an overall assessment, to which amongst others the following factors can contribute:</p> <p>Access to high quality landscapes: the presence of natural beauty and in particular <u>relative tranquillity and relative wildness</u>. There is no particular type of natural beauty that is more suitable for recreation in National Parks. Weight should be given to accessibility from centres of population"</p> <p>2. National Planning Policy Framework - Guidance 15 – Conserving and Enhancing the natural Environment.</p> <p>180. Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (<i>including cumulative effects</i>) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:</p> <p>1.1 "(a) mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life;</p> <p><i>(b) identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason; and</i></p> <p><i>(c) limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.</i></p> <p>" https://www.gov.uk/guidance/national-planning-policy-</p>	
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	<p>framework/15-conserving-and-enhancing-the-natural-environment</p> <p>3. A simple pertinent government criteria quoted, with other quotes of equal standing, by Clive Bentley [Sharps Redmore Reference: A303 / Stonehenge Project No: 1918808 Date: 9th July 2019, page 2] serves very well to explain what tranquillity is for many:</p> <p><i>“Technical note Re: A303 Stonehenge tunnel scheme: Written summary of oral submissions in relation to tranquillity on 12th June 2019: This note summarises notes concerning the assessment of tranquillity made by myself, Clive Bentley, on behalf of the Stonehenge Alliance and by the applicant at the Issue Specific Hearing on Noise and Vibration, Health and Wellbeing held on Wednesday 12 June 2019:</i></p> <p>1.2Government’s website, “GOV.UK” Natural beauty assessment criteria for National Parks and Areas of Outstanding Natural Beauty describes <u>relative tranquillity</u> as being found where:</p> <p><i>“... natural sounds, such as streams or birdsong are predominant”</i>. https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010025/TR010025-001280-Stonehenge%20Alliance%20late%20submission.pdf</p>	
39.1.2	<p>2 <u>Noise, Vibration, Lights Affecting Tranquillity</u></p> <p>- surrounding landscape</p> <p>In effect the completed scheme will <u>change these qualitative effects</u> but who knows whether its an improvement as it cannot be compared as they will be concentrated in portals in a different direction with variables of which we are, at this point, unaware. Any visible or audible concentration of a recognised nuisance viewed or heard from the Stonehenge itself particularly will be insufferable for</p>	<p>3 Noise, Vibration, Lights Affecting Tranquillity</p> <p>- Surrounding landscape</p> <p>The landscape and visual impact assessment as reported in Chapter 7 Landscape and Visual of the Environmental Statement [APP-045] has predicted an adverse effect to the tranquillity between Berwick Down and the Longbarrow junction because of the new road, with the exception of at Winterbourne Stoke, where the removal of the existing A303 from the village is predicted to be beneficial.</p>

<p>those meditating or conducting ceremonies or observing the skies in astrophysical research.</p> <ul style="list-style-type: none"> - generated within the tunnel <p>Vibration and noise nuisance will be dependent upon:</p> <ul style="list-style-type: none"> - type of fans used since they are known to create their own noise both at portals or vent shafts which again will be different at night due to weather acoustics and speed of fans and quality of silencers; - effectiveness of sound dampening tunnel lining and road surfacing. <p>We can only hope monitoring of crucial acoustic effects will be diligent and constant. <u>The ongoing nuisances generated during construction will of course be another matter!</u></p> <p>3 Lighting pollution</p> <p>This has been a constant source of anxiety and Objecting submissions regarding both portals and particularly at Longbarrow and Normanton, yet little has been said or promised to allay those concerns.</p> <p>4 Weather effects</p> <p>There are also many situational and weather related effects, especially fog, low cloud, excessive heat, water and wind effects on which we have had no clear information whatsoever that is discernible to the untrained person, so we cannot make a scientific judgment only a perceived or pre experienced consideration and wide knowledge of the landscape and I address this lack of information later on.</p>	<p>From Stonehenge, there will be no views of either the eastern or western portal, due to the intervening landform and with the existing A303 reverted to a restricted byway, the traffic will not be visible, as it will be in tunnel.</p> <p>As illustrated on Figure 9.4 of the Environmental Statement [APP-167], with the scheme in operation traffic noise levels are predicted to reduce at Stonehenge and across a large area of the WHS, primarily due to the tunnel.</p> <p>Increases in traffic noise levels within the WHS are limited to locations to the east and west of the proposed tunnel where the scheme is on a different alignment to the existing A303. The extent of the adverse impacts of the realignment of the A303 has been minimised by locating the new A303 mainline in a deep cutting, compared to the existing A303 at surface level. Tunnel portals can be a source of additional noise, therefore, as discussed at the Issue Specific Hearings and reported in the written summary of oral submissions [REP4-033] item 4iii, mitigation has been incorporated into the scheme design in the form of a noise absorbent finish at the entrances/exits of the tunnel, as secured by D-NOI6 of the OEMP [REP6-013].</p> <ul style="list-style-type: none"> - Generated within the tunnel <p>No vent shafts are proposed as part of the scheme design. As detailed in Chapter 2 The Proposed Scheme of the Environmental Statement [APP-040] nine sets of two ventilation fans would be installed in the roof of the tunnel at each end of each bore. Each fan would incorporate a silencer to reduce noise levels. The first set of fans in each bore would be approximately 100m from the entrance to the tunnel, with additional sets at 100m intervals. The main purpose of the fans is to extract smoke out of the tunnel in the event of a fire. However, a maximum of 14 fans in each bore may also operate if exhaust emissions build up in the tunnel to an unacceptable level. To reach this level a high volume of traffic would need to be moving through the tunnel very slowly (less than 20km/hr). This situation is not anticipated to occur on a regular basis as the aim of the Scheme is to alleviate congestion on the A303 and is very unlikely to occur at night. However, for completeness an assessment of the potential noise impact was carried out and reported in Chapter 9 Noise and Vibration of the Environmental Statement [APP-047]. This adopted a conservative approach in terms of fan noise source data and the number and location of the fans in operation. As detailed in paragraph</p>
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		<p>9.9.68 the results indicate that fan noise levels are anticipated to be low, below existing background noise levels at the closest receptors.</p> <p>D-NOI1 of the Outline Environmental Management Plan (OEMP) [REP6-013] requires a thin surfacing system (low noise) to be used on the mainline of the new A303 and its associated slip roads.</p> <p>D-NOI6 of the OEMP requires a noise absorbent finish to be used at the entrances/exits of the tunnel to minimise traffic noise from the tunnel portals.</p> <p>As detailed in Table 9.2 of Chapter 9 of the ES [APP-047] operational ground-borne vibration impacts have been scoped out of the Assessment. The Design Manual for Roads and Bridges identifies that the potential for significant ground-borne vibrations due to road traffic is limited to locations close to heavily trafficked roads with a poor road surface. The A303 Amesbury to Berwick Down scheme will be constructed with a new smooth surface and, in line with standard Highways England maintenance regimes, will undergo regular routine maintenance to ensure the quality of the surface is maintained over time.</p> <p>Whilst it is acknowledged that some noise will be inevitable during the construction works, construction noise impacts will be kept to a minimum through a range of mitigation measures secured in the OEMP including the application of 'best practicable means', the choice of equipment and working methods, acoustic enclosures around specific items of plant, site hoarding etc.</p> <p>4 Light Pollution</p> <p>Please refer to the Outline Environmental Management Plan [REP6-012] section D-CH9 which states that "Tunnel portal lighting will be designed to minimise light spill outside of the portals' footprint." D-CH20 states "There will be no external lighting on the cutting retaining walls, or the external facades of the tunnel control buildings and tunnel portals within the WHS during routine operation of the Scheme."</p> <p>As secured by D-CH11 of the OEMP, Longbarrow junction would not be lit, unlike the existing Longbarrow roundabout. The proposed A303 at Longbarrow junction would be below existing ground levels, and Green Bridge No. 3, which links to the two proposed dumbbell roundabouts, would</p>
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		<p>be 1metre below existing ground levels and bordered by earth bunds [OEMP D-CH1]. These features would reduce the light spill and glare from vehicles, as well as the fact that Longbarrow junction would be approximately 650m to the west of the WHS, compared to the existing A360 which forms the western edge of the WHS.</p> <p>5. Weather Effects</p> <p>With regard to weather effects, the key parameters affecting noise propagation are wind direction and wind speed. As discussed at the Issue Specific Hearings and reported in the written summary of oral submissions [REP4-033] 4 iii, the traffic noise prediction methodology is based on moderately adverse wind velocities and directions, i.e. it assumes the wind is blowing from the source (the road) to the receptor under consideration (such as an observer at Stonehenge).</p>
39.1.3	<p>5 <u>Sacred contemplation, ceremonial and astrophysical observational needs</u></p> <p>Impact of Noise, Lighting, Vibration and Disturbance of Tranquillity of sacred ambience and interaction on sensitive perception levels</p> <p>Many submissions have quoted the portals and fast-moving traffic noise and light pollution in relation to these issues. We agree with those and in an effort not to repeat what we have already submitted we now present particular concerns relating to the following concepts in relation to a quiet sacred landscape that we do now, without a tunnel, enjoy and wish to retain for ALL people. Especially with a mind to those who cannot walk miles nor afford to pay for parking of nearly £20: often the stress and cost of travelling for miles on pilgrimage put those who are impecunious at a distinct and unnecessary disadvantage.</p> <p>We would respectfully request the ExA consider also how the surrounding landscape and its visitors, pilgrims, inhabitants etc may suffer at levels that range from <i>physical audio and optical disturbance via acute sensitivity and awareness especially during times of</i></p>	<p>The Applicant respects all the situations which are listed in the response.</p> <p>The placement of part of the existing A303 into a tunnel and the removal of surface traffic by the tunnel and western approach cutting are considered to be beneficial in respect of tranquillity.</p> <p>In terms of access, there will be continued vehicles access to the Stonehenge Visitor centre and therefore to the Stones. The proposed Scheme will improve the recreational opportunities within the WHS and across the whole Scheme.</p> <p>In terms of the portals, these would not be visible from the Stones. The Outline Environmental Management Plan [REP6-012] section D-CH9 states that "Tunnel portal lighting will be designed to minimise light spill outside of the portals' footprint." D-CH20 states "There will be no external lighting on the cutting retaining walls, or the external facades of the tunnel control buildings and tunnel portals within the WHS during routine operation of the Scheme."</p> <p>With reference to [REP3-013], paragraph 52.1.4 seq., the preferred route was carefully chosen to minimise effects on archaeology (including monuments that have had their surface earthworks ploughed out and buried archaeological remains), and a comprehensive programme of archaeological evaluation surveys has informed the Scheme design to limit direct physical impacts as far as practicable, including limiting impacts on archaeological remains that contribute to the OUV of the WHS. The design has been</p>

contemplation, ceremonial and sacred meditation, due to concentrated traffic noise and lighting at portals and other effects from immense disturbance of the ground and ancestral remains that would cause loss of tranquillity peace and harmony and loss of full public amenity in the sacred area of the WHS. These situations include:

1. across the Earth surface, beneath and above: the breaking of ley energy lines, the loss of continuity of emotional and physical pathways, which countless generations have walked, sat and shared knowledge and stories on, built unknown numbers of structures for the living and the dead, lived beside the mystical burials and carried out the endless astrophysical study of the Stones that we, their descendants are meant to guard, continue and nurture;
2. great depths: the cataclysmic destructive upheaval of the surface and substratum in a uniquely ancient highly evolved, continuously inhabited and Sacred landscape;
3. ancient waterways: which have protected the indigenous and transient ancient peoples and their artefacts/memories/sites/remains which they left with us in our care;
4. sky and elementals: interference in the ability to continue the conduct of the millennia old research, study and observations of day and night sky.
5. Non human interactions: the creatures that share the sacred landscape with us will also become greatly confused by the land disturbance and loss of their tranquillity; the hares, hedgehogs, deer, bats and other wandering creatures will become disorientated and the endangered ones will certainly not be conserved as we saw with recent fencing and disturbance of the roads, permissive pathways being moved and noise from construction near the Stones; we rely

carefully chosen in order to preserve archaeological remains along the 2 mile section of tunnel, improve the setting of many heritage assets and asset groups in the central part of the WHS including the Avenue, Stonehenge itself and the Winterbourne Stoke barrow group; remove the intrusive sight and sound of traffic from the existing A303 as far as possible within the WHS; and design a scheme that is minimally intrusive in both the western and eastern parts of the WHS, including in key views from assets groups that contribute to the OUV of the WHS. Examples of how the design has been developed to limit impacts on archaeology include, but are not limited to, the choice of a northern bypass of Winterbourne Stoke, the reduced footprint and land take for Rolleston Corner, and the design and placement of the western and eastern tunnel portals and portal approaches in areas that have been shown to have limited archaeological remains within their footprint. Further information can be found in the Assessment of Alternatives, ES Chapter 3 [APP-041] and in ES Chapter 6, Cultural Heritage [APP-044, Section 6.8, Table 6.9]. The cultural heritage assessment, reported in ES Chapter 6, identifies the effects on known archaeological features whilst recognising the benefits that the tunnel will deliver for the WHS landscape as a whole.

The Applicant therefore respectfully does not agree that the surrounding landscape and its visitors, pilgrims, inhabitants etc would 'suffer'. The removal of the surface traffic would improve the tranquillity at and surrounding the Stones and therefore the contemplation, ceremonial and sacred meditation. Similarly, the Applicant considers that the Scheme would not cause disturbance to the tranquillity peace and harmony and loss of full public amenity in the sacred area of the WHS and the situations listed in the question.

	<p>on their presence enhancing our understanding and connection with the sacred landscape, their distress is ours, we are their stewards, we must protect their tranquillity and safety.</p> <p>6. <u>Human Sacred interactions</u>: loss of harmony, energy connections and tranquillity will affect and inhibit peaceful enjoyment of communing in a sacred manner and expressing reverence, respect and honouring of Higher Spirits and ancestors, shamanic and meditational interactions with ancestral memories and sacred ceremonial gatherings, sharing with fellow pilgrims and inspiring others to take care of and protect the temple monument and surround landscape,</p>	
39.1.4	<p>6 <u>Ability to respond effectively on original Public consultation</u></p> <p>The difficulties of supplying the ExA with accurate, effective responses are more pronounced as we progress in the Hearings on specifics such as Noise and Tranquillity.</p> <p>The public consultation was very restricted in terms of information, drawings, impact assessments and projections in the form of technical CAD or videos to assist in making credible informed criticisms or suggestions. These aspects indicate the probability of a judicial review and the more we continue discovering vital information we didn't know at the start, the more likely a JR becomes; especially as even the ExA is still asking for basic clarifications on drawings etc</p> <p>This unknown cumulative qualitative effect is best described by Clive Bentley in his report above in para 2 <i>"It is therefore evident that no consideration of natural and man-made sound has been made, and sound has not been properly considered, contrary to relevant planning policy and guidance"</i></p>	<p>Regarding the Clive Bentley report, the Applicant confirmed at the Noise and Vibration issue specific hearing under agenda item 4 (iv) (the Applicant's summary of which is at [REP4-033]) that a number of baseline sources had been reviewed in respect of tranquillity, as set out in paragraphs 7.6.75 seq. of APP-045, in combination with field work and the work undertaken in ES Chapter 9 Noise and Vibration [APP-047]. Therefore, sound level (natural and manmade) has been considered and the approach taken is therefore not contrary to relevant planning policy and guidance.</p> <p>Statutory Consultation was undertaken in accordance with the Statement of Community Consultation, which was subject to consultation with the Local Planning Authority and Planning Act 2008 statutory requirements. Information about the scheme proposals was available online, at public events and local deposit locations. Staff were on hand at exhibitions to talk through the proposals. The material published for statutory consultation was based on the information available at that time and was sufficient to satisfy the purpose of gaining feedback on the scheme proposals and for that feedback to be taken into consideration as part of the continuing development of the scheme up to the time of submitting the DCO application. In addition to the consultation booklet, the information provided included the Preliminary Environment Information Report (PEI Report) and its non-technical summary, as well as plans of the proposals. Further details of the approach, engagement and</p>

If these essentials are still being a mystery to those who are professional, how on earth can the average member of the public be expected to take part in a Consultation which did not mention them and subsequently even at the Hearings are still being discovered? From attendances at Issue Specific Hearings and Oral Hearings it is strongly evident that basic local concerns regarding *noise, pollution, wellbeing and tranquillity* in relation to livestock, livery stables, landscape and humans seem to be barely quantified and more assumptions made than accuracy of qualitative investigations.

If this was a legal application in court, the idea of this level of non-Disclosure of pertinent and vital evidence would be a Contempt. It certainly is of those who did their best in the Consultation periods to address the questions, but mostly blindfolded and many unlike those of us who are Registered to keep taking part, are still utterly unaware of what they missed and were not told about!

We have had the recent Wiltshire Council attempt at a late addition of their own to the Application in the shape of a Traffic Regulatory Order affecting the whole WHS: will there be more additions?

In effect the public have not had full capacity to respond effectively and certainly not since the subsequent alterations, reassessments and extra evidence that has evolved during the Hearings.

The progression of the in-depth examinations by the ExA which are impressive in their quality and care, only serve to raise the issue of Re-consultation on the new discoveries as the Inquiry in Public progresses.

- 40 We respectfully ask the ExA to take account of the feelings and fears of future nuisances and issues coming to light before and even after the project is finalised; there will be subsequent piecemeal complaints, legal and archaeological and scientific combined with complaints of local people and those who frequent the landscape regularly.**

outcomes of the consultation is presented in the Consultation Report [APP-026].

In deciding to accept the application, the Planning Inspectorate will have had regard to the adequacy of the consultation undertaken by the Applicant, and to the adequacy of consultation responses received from local authorities, who confirmed that they considered the consultation had been carried out adequately, in accordance with the relevant statutory requirements.

As part of the continuing development of the Scheme following statutory consultation, a supplementary consultation was carried out on three specific design changes and the opportunity was also taken to clarify the public rights of way proposals along the scheme. Booklets prepared to support the above consultations were written in plain English and made use of images and photographs with the intention of making them accessible to a wide audience. Non-technical summaries were also provided for the environmental information presented. Highways England made every attempt to ensure the consultation materials were easy to understand. There were a small number of instances of incorrect labelling of an image or map; these did not affect the content of the information provided in the consultation materials and do not amount to the consultation being misleading. Highways England is therefore of the view that the consultation was effective and robust in order to inform consultees and seek their views on the proposals.

Images were designed to provide an indicative visual representation of the overall Scheme at the time of consultation and auralisations were provided for a number of locations to demonstrate sound levels with and without the scheme, including at Stonehenge. Further detail is provided within the plans and drawings comprising volume 2 of the DCO application [APP-004 to APP-019].

The Applicant does not agree that the public has been denied the opportunity to consider and comment on documents produced and submissions made during the Examination. The Scheme is now subject to an examination by a panel of inspectors, who will make a recommendation to the Secretary of State for Transport. The Examination process is specifically designed to allow all those who are interested in the scheme to be involved and have their views considered during the examination, with opportunities for interested parties to make representations at hearings and in writing, including in

	<p>response to documents submitted by, and submissions made by, the Applicant during the Examination. In order to further aid public engagement, the ES has been made available in the form of a digital Environmental Statement, which you can access via the link below which may help you navigate the information on the Scheme:</p>
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<https://highwaysengland.co.uk/a303-stonehenge-library/>

The Secretary of State will make the final decision on whether the scheme receives consent.

40 The Blick Mead Project Team (REP6-044)

40.1	Responses to Examining Authority's Second Written Questions	
	Matter Raised	Highways England's Response
40.1.1	<p>CH2.1</p> <p>The Consortium agrees that Highways England should not have the final say on the form and content of the DAMS, and that final say should remain with independent statutory bodies.</p> <p>Detailed comments on the DAMS are provided in a separate submission by Paul Garwood - the main points are as follows:</p> <ol style="list-style-type: none"> 1. The DAMS is based on a weak research strategy that displays limited consideration of current national and regional research frameworks in British prehistoric archaeology, both in general terms and with respect to period-specific and Stonehenge landscape-specific research agendas. 2. The use of research framework agendas and strategies (in the form of 'research questions') in the DAMS is partial and selective. A wide range of research themes of special importance in the Stonehenge landscape are considered cursorily or not addressed at all. 3. The DAMS demonstrates a lack of engagement with the WHS as an entity (i.e. in areal, landscape terms), and ignores fundamental spatial and visual aspects of the landscape, monuments and sites within it. In effect, this fails to take account of – and indeed risks compromising – many of the OUV attributes that define the Stonehenge WHS area. 4. Methodologically, the DAMS is profoundly flawed both in principle and in terms of proposed 'mitigation' methods. There are several reasons for this, including: (i) its many failings in 	<p>Please see response to Second Written Question CH2.1 in Highways England's response to the ExA's Written Questions – Cultural Heritage [REP6-022], which explains that Highways England does not agree that it is appropriate for Historic England and Wiltshire Council to have the final decision on the form and content of the DAMS, however, every effort will be made to reach agreement on the DAMS with HMAG, Wiltshire Council and Historic England. Highways England does not anticipate having to make provision for the DAMS not being approved by the Secretary of State in its final form at the end of examination, but if it did, its starting point would be to adopt an approach consistent with other highways NSIPs, providing for subsequent approval by the Secretary of State, after consultation with Wiltshire Council and Historic England. In terms of ultimate approval of documents subsidiary to the DAMS further information on this is set out in Highways England's response to CH2.1 [REP6-022].</p> <p>1. The Applicant refutes that the DAMS 'is based on a weak research strategy that displays limited consideration of current national and regional research frameworks in British prehistoric archaeology, both in general terms and with respect to period-specific and Stonehenge landscape-specific research agendas'. The draft DAMS submitted at deadline 6 [REP6-013] states at para. 4.1.4:</p> <p>'In order to allow ready comparison with other work in the area, both the Research Themes and Questions have been modelled on those given in the Research Framework for the Stonehenge and Avebury and Associated Sites WHS ('SAARF', Leivers and Powell 2016), the South West Archaeological Research Framework (SWARF, Webster 2008) and other relevant period-based and specialist agendas. The themes adopted for investigations ahead</p>

	<p>research strategy terms (and thus major gaps and weak rationales in the proposed strategy); (ii) the lack of a coherent, transparent process for judging significance and prioritization; (iii) reliance on commercial rather than research archaeology baselines (as imposed on research projects within the WHS by the curatorial bodies that constitute HMAG) for assessing both research value and appropriate method; (iv) flawed ‘sampling’ rationales that are inappropriate in circumstances where the proposed road works will result in total destruction of all features and deposits left uninvestigated (including most of the highly important ploughzone).</p> <p>The DAMS demonstrates minimal engagement with any of the serious matters raised by a wide range of experts, including the Consortium of 22 Archaeologists that represents most of field research projects conducted in the Stonehenge landscape in the last 20 years.</p>	<p>of earlier proposals to upgrade the A303 are also considered (Leivers and Moore 2008).’</p> <p>The SAARF is focussed on the Stonehenge, Avebury and Associated Sites WHS and therefore is the most relevant and up-to-date archaeological research framework to tie the DAMS into. The SAARF references many national and regional research frameworks in British prehistoric archaeology both in general terms and with respect to period-specific and Stonehenge landscape-specific research agendas. Its author, Dr Matt Leivers, has inputted to and thoroughly reviewed Section 4 of the draft DAMS as submitted at Deadline 6 [REP6-013].</p> <p>2. See response to (1.) above. The Applicant has utilised the most relevant research themes and questions based on the results of the archaeological evaluations and has tailored these to be Scheme specific. It is not the purpose of the draft DAMS [REP6-013] to write a new research framework for the whole WHS and the submission from the Consortium of Archaeologists and Blick Mead Project Team therefore misinterprets the purpose of the draft DAMS document.</p> <p>3. The Applicant has previously refuted that the application has not engaged with the WHS as a whole, its landscape, or the fundamental spatial and visual aspects of the landscapes and monuments and sites within it [for example REP5-003; paragraphs 34.1.6; 34.1.12; 34.1.35 and 34.1.36]. The application, and in particular the HIA [APP-195], takes these aspects fully into account in a comprehensive and detailed assessment of the impacts on the Attributes that convey the OUV of the WHS, its Integrity and Authenticity. The purpose of the draft DAMS [REP6-013] is not to consider these. It is the purpose of the archaeological mitigation strategy to propose the archaeological mitigation works that are required to mitigate the impacts of the Scheme on the archaeological resource within the Scheme’s order limits – both preservation in situ and preservation by record and the particular research themes and questions that would be most directly relevant to these archaeological resources.</p> <p>4. (i). The Applicant refutes that the draft DAMS [REP6-013] is profoundly flawed. The Applicant has responded to point (i) above at points (1, 2 and 3.).</p>
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		<p>4 (ii). The archaeological mitigation works will be monitored by Wiltshire Council, Historic England and HMAG 'to ensure the timely provision of on-site advice to the fieldwork team' [REP6-013; para. 8.1.5]. Decisions regarding the significance of the remains and the sampling of those remains will be undertaken as part of these consultation meetings. The draft DAMS [REP6-013] recognises at para 1.2.2 that:</p> <p>'The Scheme passes through a landscape of high archaeological significance, both inside and outside the WHS. Accordingly, the intention of the Strategy is to apply the highest practicable standards of mitigation, employing innovative approaches to address a question-based research strategy that places the significance of the archaeological resource at the centre of decision-making both at design and implementation phases.'</p> <p>4 (iii). The Applicant refutes that it has relied 'on commercial rather than research archaeology baselines... for assessing both research value and appropriate method' or that these are 'imposed on research projects within the WHS by the curatorial bodies that constitute HMAG'. As stated in Highways England's responses to the Second Written Question LV.2.1 [REP6-30; para. 81]:</p> <p>'the Applicant rejects the suggestion that the importance of Stonehenge has been underappreciated in the ES and the HIA [or the DAMS]. Regarding emerging evidence and new theories, a review of previous archaeological investigations in area and field surveys related to the A303 Scheme is presented in Appendix 6.10 - Previous archaeological and antiquarian investigations within the Stonehenge World Heritage Site and its environs [APP-219]. This considers antiquarian enquiries, research and investigations, earlier 20th century archaeological investigations, and investigations undertaken from 1990 to 2017, including the substantial number of investigations undertaken in recent decades. Such a study can only assess publicly available, published, peer-reviewed studies in the light of the published Research Framework for the Stonehenge, Avebury and Associated Sites WHS (Leivers and Powell 2016). Emerging evidence that may give rise to new theories is almost by definition unpublished and unreported, making it difficult to assess the validity of such evidence and any associated interpretations.'</p>
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		<p>4 (iv). The Applicant refutes that the “sampling’ rationales... are inappropriate in circumstances where the proposed road works will result in total destruction of all features and deposits left uninvestigated (including most of the highly important ploughzone).”</p> <p>The sampling strategies are being developed in close consultation with Wiltshire Council, Historic England, HMAG and with inputs from the Scientific Committee. The draft DAMS has taken on board their advice and the Applicant believes that the draft DAMS as issued at deadline 6 [REP6-13] provides a proportionate and reasonable approach, has fully considered the Scheme impacts on the archaeological resource situated within the order limits, and proposes suitable mitigation in the form of preservation in situ or preservation by record as appropriate, including sub-surface features and their sampling and an intelligent and reflexive approach to ploughzone artefact sampling.</p> <p>5. Highways England disagrees with this assertion, as demonstrated above in response to each of the points put forward by the Consortium.</p>
40.1.2	<p>CH2.7 – Evidence from Professor Parker Pearson</p> <p>Professor Parker Pearson states that the western approach produced 2 burials from a 2% sample, the probability is for 100 burials for the entire area if 100% were excavated. Since the road corridor is about half the size of the western approach, that reduces the probability to 50 burials.</p>	<p>The Applicant has responded to Professor Parker Pearson’s point at ISH2 Cultural Heritage Agenda Item 5 (ii) [REP4-030] in a post-meeting note:</p> <p>‘in relation to Professor Parker Pearson’s assertion about there being 50-100 burials in the area of the western portal and the approach within the WHS... The Applicant notes that no basis for this calculation has been provided, however Professor Parker Pearson appears to have considered the potential occurrence of burials across the whole of the area evaluated in the western portal approaches (approximately 14.5ha), as opposed to the area that would be affected by the cutting (approximately 4.5ha), and on this basis the calculation would appear to be flawed.’</p> <p>The Applicant refutes that the percentage sample is as low as 2%. As stated previously in REP3-013; para 21.4.30] ‘trial trenching to augment the previous work [was undertaken] to achieve an overall sample of up to 5% by area outside of the WHS and up to 10% by area within the WHS’. The Applicant refutes that the road cutting and western portal footprint would amount to 50% of the Order limits, it is 31% of the order limits in this area.</p>

40.1.3	<p>CH2.8</p> <p>The Consortium agrees with the comments of the ExA. The heritage impact must be taken into account as part of the HIA in relation to impact on Blick Mead, Vespasian's Camp, Amesbury Park RPG and the WHS.</p>	<p>Please see response to Question CH.2.8 in Highways England's response to the ExA's Second Written Questions – Cultural Heritage [REP6-022] which explains that the heritage impact has been assessed as No change and therefore a Neutral Effect on Blick Mead and Vespasian's Camp, and a minor impact on a high value asset resulting in a Slight Adverse effect on Amesbury Abbey Grade II* Registered Park and Garden.</p>
40.1.4	<p>CH2.9i – Evidence from Professor Parker Pearson</p> <p>1. Professor Parker Pearson highlights three lines of evidence that point to a geographical division between a western funerary landscape and an eastern settlement landscape during the Early Neolithic era:</p> <ul style="list-style-type: none"> a. the exceptional concentration of long barrows in the western zone of the WHS (this density of 9 long barrows in c.4sq km is unmatched in Britain); b. the discovery of Early Neolithic pottery sherds in the eastern area but not in the western zone, by field-walking during the Stonehenge Environs Project (published in 1990) <p>the observation by Dr Ben Chan for the Stonehenge Riverside Project (report in draft, ready for publication in 2020) that excavated Early Neolithic flint assemblages from the western zone contain few tools whereas those from the eastern zones have diverse toolkits indicative of settlement activity.</p>	<p>a) The Applicant disagrees with the 'western funerary zone theory' as there are clearly long barrows in the eastern part of the WHS including that situated at the eastern end of the Cursus, and that situated within the Asset Group known as the Avenue Barrows. The Applicant would refer the Examining Authority to its response to Question CH2.9(i) in Highways England's response to the ExA's Second Written Questions – Cultural Heritage [REP6-022].</p> <p>"As stated in Highways England's Comments on any further information submitted at deadline 4 [REP5-003, para 34.1.30]:</p> <p>'The concept of 'zones' in the Stonehenge landscape – living/dead, funerary/settlement is debatable: while it is possible to read the evidence this way, it is not necessarily the case, nor is it the consensus. The Applicant considers that the suggestion of a zone of funerary activity within the Scheme boundary is not demonstrated by the evidence from the evaluation of the eastern portal and its approaches.'</p> <p>As stated in Highways England's Comments on any further information submitted at deadline 4, [REP5-003, para 34.1.2, 34.1.3 and 34.1.5], a purely 'settlement zone' is not evidenced from the evaluation results."</p> <p>Scheme impacts on causewayed enclosures, long barrows (including short long barrows and oval barrows) and cursuses, and inter-relationships between these typological monument groups, is assessed in the HIA section on Typological groupings in the Stonehenge landscape [APP-195, paras. 6-9.39 –47]. HIA paras. 6.9.44–47 address the relationships of the long barrows with each other and with the landscape. The impacts of the Scheme on the relationships between the long barrows is further considered in HIA section</p>

		<p>9.3, Potential impacts and effects of Scheme: aspects of OUV. This assesses that:</p> <p>“The Scheme would remove the sight and sound of traffic on the existing A303. Whilst the Scheme has been designed to reduce the visual intrusion of the cutting within the landscape, the new cutting would affect the physical relationships between the long barrows in the western part of the WHS. The proposed Green Bridge No. 4 (the long landbridge) would help to reduce the severance due to the cutting and would maintain physical landscape connectivity in this area, being specifically placed to ensure that the relationships are maintained between the upstanding long barrows in the Winterbourne Stoke Crossroads Barrows (AG12) and the Diamond Group (AG13).</p> <p>Taking account of the Very High value of the long barrows and in accordance with Table 5, and contrasting the varying effects on the relevant Asset Groups (AG12, AG13, AG16 and AG19 above – see Table 11), the change is considered to be both Moderate Negative and Minor Positive on the group of long barrows in the western part of the WHS. The overall significance of effect of the Scheme on the long barrows in the western part of the WHS is assessed as Slight Adverse (derived from both Moderate Negative and Minor Positive change on Very High value assets).” [APP-195, paras 9.3.2 – 9.3.3].</p> <p>b). As stated above at response (a) there are also long barrows on the east side of the WHS at the eastern end of the Cursus and as part of the Avenue Barrows, so the presence of Early Neolithic pottery sherds indicates a holistic use of the landscape rather than a specific funerary zone.</p> <p>c). As stated above (a) there are also long barrows on the east side of the WHS at the eastern end of the Cursus and as part of the Avenue Barrows. The presence of Early Neolithic flint assemblages from the western zone that contain few tools whereas those from the eastern zones have diverse toolkits sherds indicates a holistic use of the landscape rather than specific funerary zones.</p>
40.1.5	CH2.9.viii and ix - Evidence from Paul Garwood Ploughzone sampling (DAMS p.80-81)	The ploughzone sampling strategy has been revised, following consultation with HMAG, and can be found in the draft DAMS as submitted at deadline 6 [REP6-013; paragraphs 6.3.11-6.3.18]. The Applicant refutes that it is ‘low-

The rationales for low-level ploughzone sampling identified in the DAMS are misguided and unjustifiable, apparently founded on commercial-sector estimations of appropriate levels of sampling intensity concerned with the identification of 'sites', rather than the kinds of research questions fitting for the WHS. It is also deeply worrying that the kinds of sampling levels required of research investigations in the Stonehenge landscape – e.g. as specified by the National Trust and WCAS - should be suspended by the same bodies for the purposes of Highways England's proposed fieldwork programme.

The ploughzone sampling strategy outlined in the DAMS is intrinsically flawed in three respects:

- i. The proposed standard 1% to 4% sample level is insufficient for mapping ploughzone distributions of artefactual material in a fine-grained manner (essential for nuanced, detailed interpretation of settlement and social practices across the landscape).
- ii. The very low proportion of dateable lithic artefacts, which are critical for establishing chronological frames of references for interpreting lithic scatters (which make up most ploughzone artefactual material), means that these are far more likely to be missed as sampling level decreases, seriously reducing the research value of ploughzone assemblages.
- iii. The 'scalable test pitting strategy' proposed in the DAMS, to be applied in areas 'found to contain assemblages considered, in consultation with HMAG/WCAS, to be of interest', misses the fundamental need for intensive ploughzone recovery using consistent sampling levels in order to map presence/absence and different kinds and scales of activity areas comprehensively. The approach proposed would be relative and value-laden, with no objective mechanisms for judging what is and is not 'of interest', and equally likely to introduce high levels of sample bias.

Excavation sampling: tree throws (DAMS p.86)

The proposed methodology for dealing with tree throws (DAMS sections 6.3.42-43) is a good example of the fundamentally flawed

level... misguided and unjustifiable'. The approach is research-led, proportionate and reasonable and guided by a reflexive approach.

The Applicant has responded previously to the point regarding the sampling levels within the WHS [see REP5-003 paragraphs 34.1.17, 34.1.28 and 18.1.29] and that it is up to the statutory bodies, through consultation with the Applicant, to confirm whether the reflexive strategy as proposed by the Applicant (in the draft DAMS submitted at deadline 6 [REP6-013; paragraphs 6.3.11-6.3.18]) is appropriate or not.

The approach taken to date by the Applicant, utilising a 1% gridded test-pit array which mapped the presence / absence and different kinds and scales of activity areas, was endorsed by the Scientific Committee and HMAG as part of the Archaeological Evaluation Strategy. Regarding points (i), (ii) and (iii) – the ploughzone sampling strategy has been revised, following consultation with HMAG, and can be found in the draft DAMS as submitted at deadline 6 [REP6-013; paragraphs 6.3.11-6.3.18] and aims to respond to the distribution of lithic material in the ploughzone so far encountered (including concentrations, transitions and blank areas), incidence of chronologically and/or typologically distinctive pieces, coincidence with sub-surface features encountered in trial trenching, and possible topographical or activity-related distributions in order to comprehensively respond to the results of the archaeological evaluation.

With regards to tree-throw hollows, the draft DAMS as submitted at deadline 6 [REP6-013; paragraphs 6.3.48 – 6.3.50) outlines a reasonable and proportionate approach to mitigation. Each tree-throw hollow would be mapped and be systematically tested for cultural material, or other material that may be of geo-archaeological or palaeo-environmental interest. Further sampling will be undertaken, following consultation with Wiltshire Council, Historic England and HMAG. Thus, a landscape scale understanding of these features, irrespective of whether they contain cultural material or not, will be possible.

	<p>character of the DAMS with respect to excavation sampling strategies. The decision-making process concerning whether or not to sample-excavate is specious. The idea that a 'representative sample of tree throws' can be identified for investigation based on 'proximity and location' in relation to lithic scatters, monuments, 'landform', and known archaeological remains (such as tree throws near pits) is unfounded. There is no rationale that privileges these attributes over others, while the criteria defined seem to pre-judge that cultural settings will make tree throws more or less potentially research-valuable. This misses the fundamental importance of gaining a full landscape-scale understanding of these features irrespective of whether they contain cultural material or not. As with all sub-surface features that may be destroyed by the road scheme, the primary aim should be 100% excavation.</p> <p>Further details comments on question 2.9 and the DAMS more generally will be contained within the submission from Paul Garwood.</p>	
40.1.6	<p>FG2.42 – Evidence from Professor David Jacques</p> <p>10. General monitoring of Blick Mead's water table will not adequately take account of the effect on the archaeological remains there, which date 7960-3381 Cal BC (95% probability), or site 2, which has shown high potential for at least Late Neolithic/Early Bronze Age organic remains to be preserved (see Jacques et al 2018 pp58-60) and below). Any monitoring of Blick Mead and Site 2 must be based on a local model as the water table and its fluctuations are not presently well understood.</p> <p>11. Reading University's survey of the environmental setting at Blick Mead undertaken 2013-14 was an important, though limited, first step to understand the geology and hydrogeology of the site. It revealed the presence of two gravel surfaces, with only the upper gravel surface associated with sedimentary deposits containing the Mesolithic flintwork and faunal remains (see Jacques et al 2018, pp35-67). However the lower gravel surface did reveal data from peat bands (BH25 and SEHA) which provided useful</p>	<p>Please see response to Question Fg.2.42 in Highways England's response to the ExA's Second Written Questions – Flood risk, groundwater protection, geology and land contamination [REP6-028], and the deadline 1 Submission - Blick Mead - Note regarding proposals for additional monitoring [REP1-007] which explains why additional monitoring is not required to inform or confirm the assessment of the effects of the Scheme.</p> <p>All groundwater effects were found to be non-significant with negligible changes to the hydrogeology of the Blick Mead area. Nevertheless, as stated at paragraph 1.2.6 of REP1-007, it was agreed at a meeting with Professor Jacques in April 2018 and with the Heritage Monitoring Advisory Group in May 2018 that hydrological monitoring at Blick Mead would take place. Monitoring of surface water and groundwater in and around Blick Mead (covering a greater area than just the low-lying area and intermittent spring) has taken place and is continuing (see [AS-015] Additional Submission accepted at the discretion of the Examining Authority - Blick Mead monitoring to March 2019).</p>

information - see P51 that the examination of post Mesolithic (late Neolithic and Bronze Age) organic sediment sequences on the floodplain has provided insights into the environmental conditions during the period represented..".

12. The Reading report was deduced upon (a) the stratigraphic data from only 11 of the sample bore-holes samples and two trenches (19 and 22 - the latter having disturbed stratigraphy), and (b) the aquatic insects sampled in Trench 19. Nonetheless, it points to some significant conclusions –

- a. The Blick Mead site was at the edge of the floodplain - indicated by the presence of thick alluvial deposits (Unit H3 in report)
- b. Alluvial sediments (Unit 3) had gradually accumulated at the site from the Mesolithic onwards and comprise a mixture of fine-grained alluvial sediment introduced by floodwater of the Avon and colluvial material derived by downslope movement from the adjacent valley side.
- c. The site was infrequently flooded - suggested by distance from the main channel of the Avon, thinness of the silty layer (Subunit H3a) associated with the Mesolithic flintwork and fauna and long period of time over which datable material has been discovered
- d. The water had been stagnant or slow-moving water - insufficient to remove the Mesolithic flintwork and bones, the latter of which must have been in permanently deoxygenated conditions until the present for them to have survived.
- e. Site interpreted from small amount of insect remains from Mesolithic layer in Trench 19 as indicating the presence of a small, vegetation-choked pond or bog with moss or grass tussocks on the margins, situated in a landscape that includes nearby herbaceous meadows". .

The Scheme has the potential to affect groundwater flows in the Chalk aquifer. The Environment Agency stated the model was a good representation of the Chalk aquifer and shows no change in groundwater levels in the Blick Mead area [REP4-030, 8 iii].

During the ISH2 hearing it was confirmed that Highways England has followed the required guidance from Historic England in the production of the Blick Mead assessment, Historic England further confirmed this at the hearing, noting also that the assessment conducted was adequate [REP4-030, 8 iii].

As recorded in the written summary of oral submissions made at the ISH2 [REP4-030] with respect to Agenda item 8(iii), "Dr Sladen [on behalf of Highways England] confirmed that the tiered assessment process is not linked to significance of the archaeological site but to the reliability of the conceptual model. Historic England agreed with this, as did the Environment Agency". The reliability of the conceptual model has reached an acceptable level and has been verified by monitoring. A Tier 4 assessment is only required where mitigation is considered necessary to facilitate long-term preservation. As no significant effects were identified, no mitigation is necessary and therefore additional tiers of investigation and modelling are not required.

- f. Environmental conditions at the site during the Mesolithic (ca 4000 years) were considered very stable - based on stratigraphic evidence. This points to permeant and slow moving water, such as a spring provides.
- g. The highest densities of Mesolithic flintwork at the site were where the underlying gravel surface and mantle of sand rises slightly towards the edge of the alluvial floodplain.
- h. The thin layer of unstratified sediment (including Subunit H3a) associated with flintwork and fauna was laid down over a sand/gravel surface and, importantly in terms of understanding the underlying water table and topography, formed a number of depressions (pools) and channels.

13. One of the most reliable indicators of the presence of springs is the presence of travertine or tufa and the report mentions 'possible tufa debris' in the lower alluvium in bore-hole samples at Site 2 and two others (BG17, BH19) close to the Avon. Tufa or travertine is not normally formed where spring arise but becomes deposited some distance downstream depending on the chemical nature of the spring water.

14. The insect analyses from Trench 19 also provides evidence for the presence of standing water at Blick Mead. The Reading report mentions two samples collected from Trench 19, 'Taken together, this fauna indicates the presence of a small, vegetation-choked pond or bog with moss or grass tussocks on the margins, situated in a landscape that includes nearby herbaceous meadows'. As mentioned, analysis of the limited bore-hole data shows the surface of the gravel and the mantle of sand to be uneven, so there were within and close to Blick Mead site what were probably water-filled depressions and channels during the Mesolithic.

15. All the evidence supports the report's conclusion (p. 63-64) that 'the archaeological site has been protected from river activity for most of its history by its elevation above the more active parts of the floodplain. Hence the thin accumulation of alluvial material in which

	<p>the Mesolithic remains occur, and the limited thickness and partly colluvial origin of the sediments that overlie the Mesolithic layer.'</p> <p>16. It is possible that the pools and channels at the site in the Mesolithic and Neolithic were spring-fed and flowed into the nearby Avon, especially in summer during periods of low river level. The site may have been inundated in the Mesolithic when the Avon flooded (a conclusion of the report) and impacted by surface water run-off from the slopes of the 'dry' valley above and the present A303.</p> <p>17. All of these hydrological effects are poorly understood at present, thus the urgent need for localised monitoring, measuring and analysis of the water table. Future work should include:</p> <ul style="list-style-type: none"> a. Further bore holes and trenches within the Blick Mead site and its environs, adopting a grid pattern so as to more accurately map the contours of the sand/gravel boundary. b. More detailed analysis is required of any 'peat' bands discovered at the Blick Mead site, with a view to carrying out in-depth analyses of pollen, seeds and any faunal remains. c. More detailed analysis the sediment horizontal (Unit 3a in Report) associated with the main concentration of Mesolithic flintwork and bones might be revealing since it is different to the alluvial deposits above. d. Explore the possibility of carrying out a geophysical survey of the area to accurately map the contours of the gravel/sand beds. <p>Model the course of the river in pre-historic times and the extent of the floodplain.</p>	
40.1.7	<p>FG2.43 – Evidence from Professor Tony Brown</p> <p>18. The Consortium maintains its position that no adequate or appropriate monitoring has occurred at Blick Mead. There have been no shallow groundwater observations and no results have been presented. Quite apart from this, determining the absolute</p>	<p>Please see response to 34.1.74 in the deadline 5 – Comments on any further information requested by the ExA and received at deadline 4 [REP5-003] which explains that there is local monitoring at Blick Mead as described in the monitoring report [AS-015]. Piezometers are installed at different depths in the key area of interest.</p>

highs and lows in groundwater levels over a year are insufficient as the duration of extreme high and low events (and their timing) are also important.

Monitoring of surface water and groundwater is ongoing at Blick Mead even though this is not required to inform or confirm the assessment of the effects of the Scheme because all effects were found to be non-significant at Blick Mead.

A low water level and highwater level period have already been recorded (autumn 2018 and spring 2019) at Blick Mead [AS-015] and span the extremes of a typical twelvemonth period. This is sufficient as a baseline and for correlation and validation with long term records. There is no guarantee that conditions recorded over a typical twelve months will be representative of extremes. Therefore, the effects of the Scheme were assessed under a wider range of conditions rather than those likely to be experienced in a single year and include data from the drought of 1976 and floods of 2014 to ensure the widest range of consideration and therefore there are no practical implications of the shorter monitoring period that are not accounted for on a precautionary and wider scoped basis.

Please see response to Question Fg.2.42 in Highways England's response to the ExA's Second Written Questions – Flood risk, groundwater protection, geology and land contamination [REP6-028] and paragraph 34.1.44 in Highways England's deadline 5 Submission - 8.36 - Comments on any additional information requested by the Examining Authority and received at deadline 4 [REP5-003] which consider the adequacy of monitoring.

As recorded in the written summary of oral submissions made at the ISH2 [REP4-030] with respect to agenda item 8(iii), "Dr Sladen [on behalf of Highways England] confirmed that the tiered assessment process is not linked to significance of the archaeological site but to the reliability of the conceptual model. Historic England agreed with this, as did the Environment Agency".

The reliability of the conceptual model has reached an acceptable level and has been verified by monitoring. A Tier 4 assessment is only required where mitigation is considered necessary to facilitate long-term preservation. As no significant effects were identified, no mitigation is necessary and therefore additional tiers of investigation and modelling are not required.

40.1.8 FG2.44 – Evidence of Professor David Jacques

19. Further bore hole surveys are required in order to detail the many questions about the site's water table thrown up by the Reading report in Jacques 2018 and to gauge the extent of the Mesolithic site(s). It is envisaged that it continues north of the present A303 at least along the area which shares the same river terrace as Blick Mead, where Mesolithic artefacts and possible evidence for animal trampling have been discovered (Ieivers and Moore, 2008). Coring is also required to pick up on the underlying topography and any indicators of settlement activity on the terrace site at Blick Mead. The extent of the animal prints underlying the platform surface revealed in trench 24 C is required, as is the opportunity for DNA and seDNA analysis from the wet areas proposed by Southampton University under the leadership of Professor Tony Brown. 'Site 2', close to Countess Roundabout, was found to have good preservation by Reading University and yielded a Late Neolithic/Early Bronze Age date from pine (remarkably) - 2455-2205 Cal BC (95%). Blick Mead is not just about the Mesolithic and has provided artefacts from that time into the Anglo Saxon period from wetland areas. All its various phases need more detailed examination and to be preserved.

20. Re the above, Darvill's archaeological research framework for Stonehenge provides an excellent strategic platform for the work at Blick Mead and underscores the intellectual value of it (Darvill 2005). The most relevant elements of it here being:

- Investigating the importance and distinctiveness of the Stonehenge landscape past and present
- Modelling environment and landscape change
- Understanding occupation in the landscape around Stonehenge
- Filling gaps in our data

21. The work already undertaken indicates that the current research at Blick Mead will make a major contribution to any existing (or

Please see response to Question Fg.2.44 in Highways England's response to the ExA's Second Written Questions – Flood risk, groundwater protection, geology and land contamination [REP6-028] which explains that the Tiered assessment examines a larger area in order to understand the flow processes that maintain the wetting of the Blick Mead area. The relevant hydrological processes at Blick Mead are referred to in the Tiered Assessment (Annex 3 to the Groundwater Risk Assessment [APP-282]) and Comments on Written Representations paragraphs 60.3.7 to 60.3.13 [REP3-013] and followed up in the Issue Specific Hearing (deadline 4 Submission - 8.30.2 Written summaries of oral submissions put at Cultural Heritage hearings on 5th and 6th June 2019, Item 8.iii) [REP4-030]).

During the ISH2 hearing it was confirmed that Highways England has followed the required guidance from Historic England in the production of the Blick Mead assessment, Historic England further confirmed this at the hearing, noting also that the assessment conducted was adequate [REP4-030, 8 iii].

The reliability of the conceptual model has reached an acceptable level and has been verified by monitoring. A Tier 4 assessment is only required where mitigation is considered necessary to facilitate long-term preservation. As no significant effects were identified, no mitigation is necessary and therefore additional tiers of investigation and modelling are not required.

There will be no significant effect on the sources of water contributing to Blick Mead as a result of the Scheme and therefore the detail of the hydrology, whilst of interest to those studying Blick Mead, is not necessary to support the Environmental Statement or to examine and determine the application.

emerging) Research Strategies for the Stonehenge World Heritage Site. The range, scale and intensity of material already recovered from the site identify it as one of very high potential and international significance in terms of understanding how the Stonehenge landscape developed. Very few sites of Mesolithic date are known in the WHS (and, indeed, from Salisbury Plain generally). Darvill lists 30 or so findspots in the WHS but this includes the 'totem poles' just to the west of the henge, as well as one or two other pits (Darvill 2005, 39). To find such a density of early finds, some with a date match to these posts, and some with potential overlap with the beginning of the Neolithic in the area, is of great significance for a new understanding of how the landscape evolved and developed.

22. The location of springs and wet areas in this landscape immediately flags this as a place of real importance on a number of levels. Work from elsewhere in the country underscores the importance of these sorts of locales for communities over a very long time frame. These are places that people stayed close to or revisited repeatedly and they must have become significant places in the social landscape too. It is essential to think of them as being more than simple places to camp or hunt: they are also repositories of specific depositional practices that underscored the special value that was attached to sources of flowing, fresh, water.

23. Further work in the Blick Mead environs will add valuable data and create new narratives of understanding in a landscape of international significance. This work will be high profile, and it is essential that any future work is properly resourced and meshes with existing and future research strategies in the region. All trenches and finds need to be recorded 3D: the analysis costs will be high because the area is rich in terms of material culture and ecofacts (from wet and waterlogged environment) and this should include, as a minimum, specialist assessment of:-

- bone
- lithics

	<ul style="list-style-type: none"> • soils • pollen • macros, etc • molluscs <p>deposit modelling</p>	
40.1.9	<p>LV2.1</p> <p>24. The Consortium reminds the ExA of the evidence already given by Professor Parker- Pearson and Paul Garwood on this issue.</p> <p>25. It adds that as the scheme has not measured shallow groundwater levels at Blick Mead, it has not demonstrated that there will be no serious adverse impacts on the remains at that site. As such, it cannot be said that the scheme has been developed to avoid impacts on the known concentrations of internationally significant Mesolithic remains at Blick Mead.</p>	<p>Please see response to 34.1.74 in the deadline 5 – Comments on any further information requested by the ExA and received at deadline 4 [REP5-003] which explains that there is local monitoring at Blick Mead as described in the monitoring report AS-015. Piezometers are installed at different depths in the key area of interest. Further monitoring is not required to support the Environmental Statement as explained in the deadline 1 Submission - Blick Mead - Note regarding proposals for additional monitoring [REP1-007].</p> <p>This monitoring and catchment-wide Chalk aquifer groundwater monitoring has led to the development of a conceptual model and Tiered Assessment. The reliability of the conceptual model has reached an acceptable level and has been verified by monitoring.</p> <p>During the ISH2 hearing it was confirmed that Highways England has followed the required guidance from Historic England in the production of the Blick Mead assessment, Historic England further confirmed this at the hearing, noting also that the assessment conducted was adequate [REP4-030 8 iii]. The assessment found no significant effects to Chalk groundwater levels beneath Blick Mead. Please see the response to item 40.1.7 above.</p> <p>A Tier 4 assessment is only required where mitigation is considered necessary to facilitate long-term preservation. As no significant effects were identified, no mitigation is necessary and therefore additional tiers of investigation and modelling are not required.</p>

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