A303 Amesbury to Berwick Down

TR010025

Volume 8

Deadline 4
8.31 - Comments on the DAMS and on any further information requested by the ExA and received to Deadline 3

APFP Regulation 5(2)(q)

Planning Act 2008

The Infrastructure Planning (Examination Procedure) Rules 2010

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Infrastructure Planning

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A303 Amesbury to Berwick Down

Development Consent Order 20[**]

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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 3.

1.2 Structure of this document

1.2.1 This report is structured by Interested Party and includes 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 were regarding:

- Comments on the Detailed Archaeological Mitigation Strategy (DAMS) [REP2-038] submitted at Deadline 2;
- Comments on the Relevant Representations Report [AS-026] submitted prior to Deadline 2;
- Comments on Written Representations [REP2-045 to REP2-213 and REP2a-001 to REP2a-005] submitted at Deadline 2 and 2a respectively;
- Comments on the responses to the Examining Authority's Written Questions [REP2-020 to REP2-037] submitted at Deadline 2;
- Comments on the Book of Reference [REP2-007] submitted at Deadline 2;
- Written confirmation of oral statements made at Open Floor Hearings; and
- Additional submissions.

1.3 The Examination Library

1.3.1 Reference in these questions 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 Chris Gillham (REP3-075)

2.1	Additional Submission	
	Matter Raised	**Highways England's Response**
2.1.1	At the Preliminary Meeting, amongst miscellaneous interventions, I made two points that I feel were probably regarded as displaying a negative attitude to this Inquiry: - That Climate Emergency did not figure at all in the process.	Highways England notes that a climate emergency was declared by the UK Parliament in the House of Commons on 01 May 2019, and that the UK Government has this month committed to introducing legislation that would require the UK to achieve net zero carbon emissions by 2050. A similar declaration was also made by Wiltshire Council in February 2019. As these specific statements followed the preparation and submission of the Scheme proposal in October 2018, Highways England welcomes the opportunity to comment on these specific climate change statements now. Whilst "climate emergency" is not itself defined in the declarations, a common theme of the declarations is to seek to reduce UK carbon emissions. Whilst the declarations do not of themselves create binding obligations, the UK is committed to achieving existing national and international commitments to reducing carbon emissions. In order to ensure compliance with these targets, Highways England has thoroughly and robustly assessed the Scheme's effect on climate change. For instance, this assessment established that even during the period when carbon emissions from the project will be at their highest level, the project will only contribute to 0.023% of the UK's carbon budget for the relevant carbon budget period (the 4th carbon budget period). During Scheme operation, the Scheme's carbon emissions will equate to an extremely marginal 0.008% of the UK's carbon budget for the 5th carbon budget period (please see response to item CC.1.6 in the Examining Authority's Written Questions [REP2-028]. Highways England 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. Highways England considers climate change to be a very important issue, as such has conducted a thorough assessment of the impact of the Scheme on climate change. The recent declarations made by the UK Parliament and Wiltshire Council do not give cause to alter the conclusions of the ES assessment and the Scheme will make an extremely limited contribution to the UK's carbon targets. Please also see responses on pages 12-1 and 12-2 of the Relevant Representations Report [AS-026.

3 Jonathan Eldude (AS-037)

3.1	Additional Submission	
	Matter Raised	**Highways England's Response**
3.1.1	I'd like to put in an objection to planning consent to a tunnel going under Stonehenge.	See responses on pages 15-1 and 11-1 of the Relevant Representations Report [AS-026].
3.1.2	It will damage our history as people will get less and less of a sense of the history of the site and its surroundings with possible carparks being built in the future,	See response 12.3.140 in the Comments on Written Representations [REP3-013] and responses on pages 2-12, 11-1, 11-27 and 12-1 of the Relevant Representations Report [AS-026].
3.1.3	(It will mean) desicratioin of the burial mounds.	See response to item 12.3.188,17.1.1 (specifically, 17.1.11) and 40.2.16 in the Comments on Written Representations [REP3-013].
3.1.4	(It will mean) more dirt from traffic poluting the stones and causing acid erosion.	See response on page 8-4 of the Relevant Representations Report [AS-026]. As stated in paragraph 5.5.1 in the Environmental Statement, Air Quality, Chapter 5 [APP-043], the assessment of construction phase traffic effects (typically HGV assessment and traffic management assessment) and operational phase traffic effects (local operational assessment) use a study area of 200m around road sections likely to be affected by the Scheme. This is due to the effect of pollutants from road traffic reducing with distance from the point of release, and beyond 200m these are likely to have reduced to a concentration equivalent to background concentrations. The DMRB distance of 200m also applies to tunnel portals as described in Section 5.9. During the operational phase of the Scheme, the standing stones will be more than 200m from road sections likely to be affected by the Scheme and therefore concentrations are expected to be equivalent to background concentrations. As

		such, a significant change in air quality which could result in acid erosion at the standing stones is not anticipated.
3.1.5	The tunnel will damage the geology.	The Applicant has completed a thorough assessment of the effects of the Scheme on flood risk, groundwater protection, geology and land contamination. The Applicant is not sure what is meant by the term "geology" in this comment and which aspect the concern relates to. However in general, the Applicant considers that the existing Scheme documentation and submissions clearly set out the position with regard to geology - please see, for instance, the Environmental Statement Chapter 10 (Geology and Soils) [APP-048], the Relevant Representations Report, specifically responses on pages 10-11 and 10-12 of the Relevant Representations Report [AS-026] and section 17 of the Comments on Written Representations [REP3-013].
3.1.6	People are less likely to visit or even be aware that such a significant place exists with a tunnel.	See response to item 12.1.7 in the Comments on Written Representations [REP-013] and response on page 3-7 of the Relevant Representations Report [AS-026].
3.1.7	Future events may not be able to take place because of the new road interfering with ceremonial gathering leading up to the site.	See response to Written Question HW.1.16, HW.1.17 and HW.1.24 in the Examining Authority's Written Questions – Health and Wellbeing [REP2-032].
3.1.8	The visual impact on the area with its flatness and unobscured site of the raising and setting sun will be diminished.	See responses to items 12.1.1 and 12.1.2 in the Comments on Written Representations [REP3-013] and response to Written Question HW.1.24 in the Examining Authority's Written Questions – Health and Wellbeing [REP2-032].
3.1.9	The noise and vibration from increased traffic will impinge on ceronmonys	The operational traffic noise impact on the WHS is illustrated for the opening year on Figure 9.4 [APP-147]. This highlights that a major reduction in traffic noise level is predicted along the tunnelled section of the Scheme, and outside of the tunnelled section decreases in traffic noise levels occur on the existing A303 alignment and increases on the new alignment. It should be noted that the location of the new road, outside the tunnelled section, at the base of a deep cutting through the WHS, will minimise the propagation of traffic noise, compared

		to the current A303 which is at grade. The operational traffic noise predictions include the anticipated increases in traffic flows and speeds on the A303 with the scheme in place. Mitigation is also incorporated into the design through the use of a thin surfacing system which results in lower levels of noise generation than a standard hot rolled asphalt surface (D-NOI1), the use of a noise absorbent finish to the walls/roof at the entrances/exits of the tunnel and Green Bridge No. 4 (D-NIO6), and the design of the surface finish of the retaining walls at the approaches to the tunnel portals to reduce the reflection of noise (D-NOI5).

4 Andrew Rhind-Tutt (REP3-086 to 090)

4.1	Comments on Site Inspection	
	Matter Raised	**Highways England's Response**
4.1.1	**Objection to the application by Highways England for an Order Granting Development Consent for the A303 Amesbury to Berwick Down – TR010025 – Further information as requested at the site visit to Byway 12 in accordance with deadline 3.** I refer to the Highways England site visit of Byway 12 on Tuesday 21st May 2019. When on site, I made reference that whilst one of the published intentions of the £2billion tunnel was to remove the road and reconnect the landscape, in fact from byway 12 (which is the only free public accessible historic viewing platform of Stonehenge and Kings Barrow ridge) the road alongside Stonehenge is not visible and nor is any of the high sided traffic on it. The only piece of road that is visible is that which will remain in place as a byway in the future. This photo was taken on the day. I wish for the planning inspectorate to take this into consideration when deliberating on the perceived benefits of this scheme.	The Applicant also attended the Site visit on Tuesday 21st May 2019 and respectfully states that the matters raised in item 4.1.1 are not accurate. The existing A303 is visible from byway 12, as demonstrated by the Site visit and the Landscape and Visual Impact Assessment [APP-045] and visual receptor 17 [APP-108], being visible in views from along byway 12 and in close range views where byway 12 adjoins the existing A303 and in longer distance views, where the existing A303 is visible across rising landform towards New King Barrow ridge to the east of Stonehenge. The matters raised suggest that the only piece of road which is visible is that which will remain in place as a byway (i.e. that across the rising landform towards New King Barrow ridge). The view of the restricted byway will not be the same as that of the view of the existing A303, due to the proposed A303 vehicles being in the tunnel, the bound surface for the restricted byway being 3metres in width and the remaining extent of the existing A303 being returned to chalk grassland. This change to the view forms part of the assessment of visual effects, with significant beneficial effects predicted for users of Byway 12 and at Stonehenge with views towards New King Barrow ridge, as summarised in Table 7.9: Visual effects operation year 1 in APP-045.
4.1.2	**Objection to the application by Highways England for an Order Granting Development Consent for the A303 Amesbury to Berwick Down – TR010025 – Further information as requested at the site visit to Amesbury Abbey in accordance with deadline 3.**	See responses to items 61.2.7, 26.4.17, 26.4.18, 26.4.19, 26.4.20 and 26.4.21 in the Comments on Written Representations [REP3-013].

	I refer to my discussion with Highways England and the Cornelius- Reid family solicitors at the site visit of Amesbury Abbey on Tuesday 21st May 2019. Whilst on site the planning inspectorate were shown a photo montage created to demonstrate the height of the proposed flyover at a given location alongside the river and gardens of Amesbury Abbey Mews Cottages. The image provided by Highways England is incorrect and shows the existing road (with car on it) considerably lower than the actual road. This error was pointed out by myself and Mr Brian Edwards at the consultations in 2018 and a request was made at the time by the Cornelius –Reid family for Highways England to provide accurate photo impression so that they and their residents can consider the full impact. To demonstrate the error, I took a photograph from the precise location whilst a lorry was driving on the same road that the car is supposed to be on in the consultation photo. You will see how misleading this is. Further I have overlaid a line showing the height of the existing road in blue and proposed flyover height (with fence) in orange. Today, I witnessed the same HE photo in use and shown to Mrs Sebborn at Bowles Hatches. This is false and very misleading and needs to be addressed. Highways England must provide an accurate representation of how the flyover will look so that an informed response may be given by the people most impacted.	

4.2	Oral Submission	
	Matter Raised	**Highways England's Response**
4.2.1	**Objection to the application by Highways England for an Order Granting Development Consent for the A303 Amesbury to Berwick Down – TR010025 – Further information as requested at open floor hearings in accordance with deadline 3 – Alternative routes.** I refer to my letter of Friday 3rd May 2019 and my presentation to the Planning Inspectorate at the 1st open floor hearing on Wednesday 22nd May 2019, where I discussed the issues and impact of the traffic on local roads each time the A303 is closed for scheduled or unscheduled maintenance. I mentioned specifically the HGV lorry movement west from Solstice park. At the same time I talked briefly about an alternative solution, which utilised and upgraded existing highways and byways where possible and left the World Heritage Site intact and undisturbed. This solution addresses the need for reduced traffic congestion at Stonehenge and the World Heritage Site, connects Grateley Railway Station, Porton and Boscombe Down, A30, A36, A345, A354, A360 including Salisbury Hospital, Churchfields industrial estate, Wilton Parkway and the existing Stonehenge Visitor Centre. It also provides the major tourist attraction of Salisbury with a complete ring road and would have a major boost to the local economy. The road itself would replace a large amount of existing road and therefore would sit well within budget. This solution was presented to Andrew Alcorn of Highways England and Simon Laurence of Atkins Arup JV in 2016. However in their departure from the project, no further contact or reason was given for it not being taken forward. The drawings below show the impact the existing South Wiltshire trunk roads have on traffic movement and how a much wider Southern	Highways England have responded to Andrew Rhind-Tutt's oral submission in [REP3-012], section 5.6. Also, see responses to items 61.2.1, 61.2.3 and 61.2.5 in the Comments on Written Representations [REP3-013].

	bypass, whilst retaining the existing A303 as a toll road would reduce pressure on all roads and provide choice for drivers. I would like the opportunity to present this alternative solution to the planning inspectorate at an appropriate hearing.	
4.2.2	Further to my oral presentation at the open floor hearing 1 this morning, please may I ask you to share with the inspectorate the below email which confirms the discussion that were being held with Mr Alcorn regarding the alternative Southern Bypass and which were dropped after Mr Alcorn left the project. Due to time constraints today, I am unable to share the reams of correspondence around this alternative proposal, however I wish to register the fact that the route was not one that has ever been considered before. I would therefore like the opportunity to present the more detailed proposal at an appropriate moment. Attached is a basic outline of the route current and proposed, the red lorries are in relationship to the value of business impacted by the roads they are on as per the Salisbury Chamber survey that was carried out for Atkins/Arup.	See response to items 50.1.34 and 61.2.5 in the Comments on Written Representations [REP3-013].

5 Amesbury Museum and Heritage Trust (REP3-048)

5.1	Additional Submission	
	Matter Raised	**Highways England's Response**
5.1.1	**Deadline 3 submission – Objection TR010025 - A303 Amesbury to Berwick Down – Registration number 20020867 Further request for information regarding deeds of Stonehenge and restrictive covenants** It would appear from the responses I have seen that Highways England representatives are confusing the deed of gift conditions of 26th October 1918 (which were discussed at the previous Stonehenge Tunnel hearing) with the actual covenants contained within the 1915 deeds that protect the integrity of the landscape and Stone circle. It must be remembered that the gift of Stonehenge was to the nation. It is therefore in the public interest that there is full transparency over this matter and that the covenants are identified, made public and dealt with accordingly. We would therefore like to know why Highways England have not yet produced this information or proposed how they intend to fully address the matter once the deeds are made public.	See response to items 67.4.1 – 67.4.4 in the Comments on Written Representations [REP3-013].

6 Wiltshire Council (REP3-042 to 046)

6.1	Comments on Written Representations	
	Matter Raised	**Highways England's Response**
6.1.1	(888 – Trail Riders Fellowship) Wiltshire Council is requesting motor vehicle restrictions on specified byways within the WHS, to be included in the draft DCO. The restrictions would apply to motor vehicles, with the exception of vehicles in the services of the Police Authority, Fire and Rescue Authority and the Ambulance Service, statutory undertakers, public services (and their contractors, Highways England and their contractors, and English Heritage and their contractors), agricultural vehicles and motorcycles. The specified bywayd are Byways Open to All Traffic (BOAT) and Restricted Byway (RB): • BOAT Durrington 10 (from its junction with Fargo Road to its junction with BOAT Amesbury 11 and C506) • BOAT Amesbury 11 (full length) • BOAT Amesbury 12 (from its junction with BOAT Durrington 10 crossing over C506 to its junction with A303 • BOAT Amesbury 12 from its junction with A303 to its junction with BOAT Wilsford cum Lake 1 • RB (old surface route of A303 length of 400 metres from its junction with BOAT Amesbury 11 to its junction with BOAT Amesbury 12) • BOAT Wilsford cum Lake 1 (full length) • BOAT Wilsford cum Lake 2 (full length) • BOAT Berwick St. James 11 (full length BOAT Woodford 16 (full length).	See response to item 22.7.79 in the Comments on Written Representations [REP3-013] and also agenda item 4 in the written oral submission from ISH6 regarding traffic and transportation.

6.1.2	(895 – the Turner family) The report states that the compaction of tunnel arisings at Manor Farm, to stabilise it on the slope, will produce an impermeable cap over the existing permeable chalk, which will lead to increased surface water runoff. Wiltshire Council are awaiting the final modelling results demonstrating no detriment in terms of surface water management. Wiltshire Council supports the report's suggestion in section 7.8 for testing to assess the impact of construction traffic on the permeability of the chalk pasture. The report states that HE have not assessed the risk of flooding based upon the January 1841 and autumn 2000 flood events, and that the 2000 flood event in fact exceeds the 2014 event that has been considered. Wiltshire Council requests that HE respond to these statements and provide evidence of the robustness of their flood risk assessment and how these events have been accounted for.	See response to item 43.5.7 in the Comments on Written Representations [REP3-013] regarding compaction. The risk of flooding based upon the January 1841 event has been considered in Section 6.7 of the FRA [APP-283]. The December 2000 event was considered and included within the hydrological analysis as part of the gauge records at Amesbury [APP-283]. Within the FRA modelling methodology, as agreed with both Wiltshire Council and Environment Agency, no reference to the 2000 event was made by either party. For reference, no gauge records for the River Till are available for either event. See also response to item 43.5.4 in the Written Representations Report [REP3-013].
6.1.3	(871 – Andrew Rhind Tutt) This representation includes reference (p4 Transport) to concerns about the impacts resulting from closure of the tunnels. Wiltshire Council would respectfully invite the ExA to challenge the evidence put forward in relation to the likely frequency of tunnel closures (actual at Hindhead, forecast at Stonehenge), the timing of the closures (planned), and the frequency of use of the A303 by high and / or abnormal loads.	See response to item 2.13.2 in the Oral Submissions Report [REP3-012]. The tunnel will require periodic maintenance to be undertaken, in order to support the operation of a safe and high performing asset. Whilst the details of the planned tunnel closure sequence will be finalised during detailed design stage, other tunnels in the UK such as the A3 Hindhead tunnel close each bore as standard for routine maintenance roughly every 12 weeks i.e. one bore closed on a six-weekly cycle. This is standard practice and is largely based on the frequency of key tunnel maintenance activities such as tunnel wall washing and maintenance associated with jet fan ventilation, lighting, drainage pumps, fire mains, structures and highway inspections, electrical testing and inspection, variable message signs and emergency telephones. Planned work is undertaken overnight between 9pm to 6am generally across a three to four-night period per closure cycle. In the last 12 months at Hindhead tunnel some of these closures have been to address tunnel specific matters related to asset improvement works, rather than simply routine maintenance. See response detailed in the oral submission for ISH6, agenda item 6.1, submitted at Deadline 4 for further information on Hindhead tunnel closure frequency. The A303 will seek to optimise maintenance activities, maximise lane availability and minimise tunnel closure

		frequencies by taking a proactive approach to tunnel asset management; undertaking close monitoring of equipment performance and asset condition to deliver a safe and reliable environment. All HGVs will be able to use the tunnel except for abnormally high loads. Records from (Transport Assessment [APP-297] (Paragraph 6.15.6)) indicate that there are approximately two abnormal vehicles registered per year as using the A303 which would be restricted from using the tunnel. No abnormal height vehicles were recorded during surveys of the local road network undertaken for this project. The impact of these very occasional abnormal height vehicles using diversionary routes is therefore not considered to be significant.
6.1.4	(828 – Amesbury Abbey Group) Blick Mead surveys are still ongoing and this is being checked as part of the works carried out by Aecom as HE consultants. There is a recommendation that further sources of water from wells and springs should be included within the assessment. As Lead Local Flood Authority (LLFA) we can pass this on to HE.	As per agenda item 5.2 in the written oral submission for ISH4, no monitoring is required for Blick Mead given that no significant effects have been identified. We would consider including it in the Groundwater monitoring plan, in consultation with the Environment Agency and Historic England.
6.1.5	(810 – the EA) Further to the issue of dewatering raised in section 1.6, Wiltshire Council has also raised concerns about the potential flooding impacts associated with dewatering for the tunnel construction. Wiltshire Council has requested that the Applicant specify a tunnel construction method that minimises dewatering, instead of leaving the choice of tunnel construction method to the appointed Contractor. Wiltshire Council is in agreement with the EA that a separate risk assessment will be required for any discharge associated with dewatering to ensure that flood risk is not increased. The flood risk assessment would need to be approved by Wiltshire Council and may require land drainage consent.	See response to item 22.5.22 in the Written Representations Report [REP3-013]. Please also see the Applicant's comments on Wiltshire Council's response to Written Question DCO.1.7 [REP3-016]. In summary, the potential requirement for dewatering during construction based on the current design and construction methods, no abstraction of groundwater is anticipated. The only circumstances in which temporary and localised groundwater control could be required would be for the construction of the tunnel portal slab to launch the tunnel boring machine and also for some cross passages for mechanical and electrical services at Stonehenge Bottom when groundwater levels are exceptionally high. Furthermore, the Applicant has committed in the OEMP [REP3-016], reference MW-WAT8, to adopt techniques that minimise, so far as reasonably practicable, the need for and extent of dewatering and groundwater abstraction. The OEMP contains measures to mitigate impacts of dewatering should it be required, and these have been agreed with the Environment Agency (see Statement of Common Ground [REP2-012]). In respect of the discharge of water, the same principles apply. Any discharge would require an Environmental Permit to be

		granted by the Environment Agency in accordance with the Environmental Permitting (England and Wales) Regulations 2016 rather than Wiltshire Council under its land drainage functions. See also response detailed in oral submission for ISH4, agenda item 5, submitted at Deadline 4, dealing with matters relating to flood risk, Groundwater protection, geology, land contamination, waste and materials management. The Applicant intends to secure the use of closed face tunnelling techniques in the updated version of the OEMP to be submitted at Deadline 4.
6.1.6	(741 - The Turner family) Representation 14: The Council supports the Turner family's request that HE assess the impact of compaction on the underlying geology. Wiltshire Council would require evidence that the proposed development will not alter the drainage characteristics of the site area so as to cause flooding (ponding) or lead to increased surface water runoff.	See response to item 6.1.2 above.
6.2	**Comments on Written Questions responses**	
	Matter Raised	**Highways England's Response**
6.2.1	G.1.10, AL.1.20, DCO.1.4, HW.1.12: The Council considers that the adverse effects of the severance can and should be addressed within the DCO by the placing of restrictions on motor vehicle use on specified byways within the World Heritage Site, to be included in the draft DCO.	See response to item 6.1.1 above.
6.2.2	Ag.1.18: The Council has worked with the EA and HE to ensure that the CEMP and the OEMP cover the activity during the construction of the tunnel. Officers have asked for the pre-and post-catchment to be modelled to ensure that the haul roads and reprofiling does not impact on surface water flows or increase flood risk.	Please refer to Section 10.4 of the FRA [APP-283] which describes the flood risk from the proposed Scheme – temporary works.

6.2.3	CH.1.1: Wiltshire Council is disappointed that the additional information requested has not been provided. Furthermore, the Council disagrees that an addendum to the Environmental Statement is not required.	The archaeological evaluation and survey reports were submitted to the Examination on 12 April 2019, as promised at the Preliminary Meeting (see Examination Library Reference REP1-039 – REP1-056). No additional information is required. Please refer to Section 4.02 of Highways England's Comments on Wiltshire Council's Local Impact Report [REP3-014] which describes the full and comprehensive programme of archaeological evaluation surveys that were undertaken to inform the ES and HIA, and the reporting of results. It also sets out, along with Section 21.1 of Highways England's Comments on Written Representations [REP3-013], paragraphs 22.1.19 to 22.1.22, why an addendum to the Environmental Statement is not required. No addendum to the Environmental Statement will be provided, as the results reported in the Environmental Statement are not changed as a result of the archaeological evaluation and survey reports.
6.2.4	DCO.1.31: The Council draws attention of the ExA to the apparent improper use of the phrase 'temporary stopping up' in the DCO. Stopping up of highway is a permanent state. HE have indicated that as the phrase has been used in the Government advice notes on DCO preparation that it is acceptable. That appears to be simply perpetuating a wrong.	The Applicant acknowledges that, in Highways Act 1980 terms, "stopping up" is understood to be a permanent extinguishment of a highway. However, the development consent order if made, would be made under the Planning Act 2008. The term "temporary stopping up" is used in article 11 of the Infrastructure Planning (Model Provisions) 2009 upon which article 11 of the draft development consent order is based. The term has been used in the majority of highways development consent orders, such that the Applicant considers its use to be widely accepted and understood in orders under the 2008 Act and sees no reason to depart from the established precedent in this case.
6.2.5	DCO.1.99: The Council would be broadly supportive of bullet iii. The Council suggests that the opening wording of requirement 7 be clarified by substituting the following wording "7.- (1) In the event that contamination of land and / or ground water is identified at any time…"	In respect of Written Question DCO.1.99 (ii), please see the Applicant's response [REP2-030] and the Applicant's summary of oral submissions from ISH1 regarding the DCO, item 4.6, submitted at Deadline 4. In respect of the suggested amendments to requirement 7, the wording proposed appears to have the same effect as the current wording and so the Applicant does not propose to make the suggested amendment. The Applicant will continue to discuss the Requirements with the Council and if this misunderstands the concern, the Applicant would be happy to discuss further.

6.2.6	DCO.1.104: Wiltshire Council will seek a provision in the OEMP to address the approval of temporary access points and their removal.	The updated OEMP submitted at deadline 3 [REP3-006] amended measure M-GW30 to require accesses formed or improved, for the purposes of construction are removed or downgraded as appropriate following completion of construction. Item MW-TRA5 of the OEMP [REP3-005] (Site Travel Plan, to be included within the Traffic Management Plan) addresses routes to sites for materials and plant. An amendment to the OEMP submitted at Deadline 4 will be made to include temporary site access points: *'The plan shall identify routes to site for materials and plant and temporary site access points. Final agreed routes and access points will be detailed within the TMP and all sub-contractors will be provided with copies throughout the duration of the works.'* As stated within items MW-G5 and MW-G7 of the OEMP, Wiltshire Council will be consulted during the development of the CEMP and subsidiary plans (which includes the Site Travel Plan as part of the Traffic Management Plan). Furthermore, an amendment will be made to item MW-TRA5 to include a requirement for the main works contractor to develop a temporary site access point removal strategy, in consultation with Wiltshire Council, prior to the removal and reinstatement of temporary site access points. The Traffic Management Plan, which will contain the Site Travel Plan, must be approved by the Secretary of State following consultation with Wiltshire Council in accordance with requirement 8.
6.2.7	DCO.1.107: The Handover Environmental Management Plan (HEMP) will outline how the development must be operated and maintained. Wiltshire Council requests that the HEMP be prepared in consultation with Wiltshire Council.	Wiltshire Council has been included as a consultee on the preparation of the HEMP(s) in the updated OEMP [REP3-006], see item MW-G11.
6.2.8	Fg.1.1: The advice of Public Health England should be sought with respect to Radon.	See response to Written Question G.1.8 part 5 [REP2-021].

6.2.9	Fg.1.11: The mitigation measures in HE's response assumes the use of a tunnel boring machine (TBM), however the tunnel construction method, and associated dewatering requirements, is not confirmed at this stage. Chapter 2 of the ES states that a TBM is "likely to be used", but the choice of method would be left to the appointed contractor. The Council requires for dewatering mitigation measures to be secured within the DCO.	See response detailed in agenda item 5 of the written oral submission for ISH4 regarding matters relating to flood risk, groundwater protection, geology, land contamination, waste and materials management, submitted at Deadline 4. Please also see the Applicant's comments on Wiltshire Council's response to Written Question DCO.1.7 [REP3-016]. In summary, the potential requirement for dewatering during construction based on the current design and construction methods, no abstraction of groundwater is anticipated. The only circumstances in which temporary and localised groundwater control could be required would be for the construction of the tunnel portal slab to launch the tunnel boring machine and also for some cross passages for mechanical and electrical services at Stonehenge Bottom when groundwater levels are exceptionally high. Furthermore, the Applicant has committed in the OEMP [REP3-016], reference MW-WAT8, to adopt techniques that minimise, so far as reasonably practicable, the need for and extent of dewatering and groundwater abstraction. The OEMP contains measures to mitigate impacts of dewatering should it be required, and these have been agreed with the Environment Agency (see Statement of Common Ground [REP2-012]. Furthermore, the Applicant is no longer seeking the disapplication of abstraction licensing which was removed from the draft development consent order at deadline 2 [REP2-003]. The Applicant and the Environment Agency, which would be the consenting body should dewatering be required in excess of the existing exemption thresholds, have now reached agreement on protective provisions. No further controls are necessary or appropriate.
6.2.10	Fg.1.14: Wiltshire Council requests automated control of the tunnel drainage system.	See response detailed in agenda item 6 of the written oral submission for ISH4 dealing with matter relating to flood risk, groundwater protection, geology, land contamination, waste and materials management, submitted at Deadline 4.
6.2.11	Fg.1.17: Wiltshire Council provided comments on the additional groundwater reports, in the form of an addendum to its written representation, to the examining authority at deadline 2a. There are a number of groundwater	This issue is addressed within agenda item 6 of the written oral submission for ISH4. The current guidance on climate change allowances for England is published by the Government, at www.gov.uk/guidance/flood-risk-assessments-climate-

	issues which still require resolution and / or clarification. The additional reports did not address the outstanding road drainage and surface water peer review actions.	change-allowances, this states that for rainfall intensities, used in assessing surface water flood risk, both the central (20%) and upper end (40%) allowances should be assessed to understand the range of impact across the lifetime of scheme into the 2080s. It further states that to help to decide which allowances to use, consideration should be given to: i. The likely speed, depth and extent of flooding for each allowance; ii. The vulnerability of the receptors that could be flooded; iii. Any built-in resilience measures; and iv. Any capacity in the development to include additional measures in the future. The updated Road Drainage Strategy [REP2-009] states in 3.24 that an allowance of 30% was used in the preliminary design of the basins as DTAs. The updated Flood Risk Assessment (FRA) [REP3-008] states in 5.3.10 that the surface water flood risk assessment used an allowance of 40%. When assessed using this allowance, the road drainage basins were found to contain the design storm without overtopping. The following built-in measures are proposed: • In the event of a rainfall event exceeding the design storm (1 in 100 year +30%) exceedance routes have been identified to ensure excess water does not flow towards vulnerable properties. • The basins are designed based on an infiltration rate one twentieth of the lowest rate corresponding to the soakaway test closest to the area. (2.4.4 of the Road Drainage Strategy). • The basins include a 300mm freeboard. There would therefore be sufficient capacity within the preliminary design of the road drainage strategy, west of the tunnel, to manage storm water runoff safely. There is capacity to enlarge the basins as all the Drainage Treatment Areas are within the Red Line Boundary. In the event that the national guidance changes before detailed design is carried out, this would be considered. Similarly, if additional measures are required in the future, there is space to do this. This is also one of the reasons there needs to be a degree of flexibility in the Scheme to

		enable such beneficial adaptation to take place within the delivery of a consented scheme. Given the proposed measures and the capacity to include further measures, Highways England concluded that it was not necessary to incorporate the upper end allowance. It did however decide to increase the allowance beyond the central allowance: from 20% to 30%, as a precautionary measure. **Groundwater:** Wiltshire Council requested clarification of the rationale for the climate change allowances used in the groundwater assessment. Highways England provided clarification in 5.3.12-5.3.15 of the ES Appendix 11.5 Rev 1. The latest groundwater model runs used a 40% increase in the recharge, which is consistent with fluvial and pluvial allowances again demonstrating a robust and conservative approach. Consultation is continuing with the Environment Agency and Wiltshire Council and a meeting was held regarding these issues on 20th June 2019.
6.2.12	Fg.1.20: In response to point 4: DMRB guidance in document HD45/09 states that "as climate change allowances are continually being reviewed they are subject to change and it is therefore recommended that the designer should consult with the Environment Agencies (EAs) to agree the allowances to be made". The EA recommended allowances are 40% in this instance, therefore Wiltshire Council requests that the 40% allowance be used for the road drainage design, as was done for the land drainage design.	The NPSNN in 4.42 requires that adaptation measures should be based on the latest set of UK Climate Projections and consultation with statutory consultation bodies. The current (Jun 2019) guidance on climate change allowances for England is published by the Government at www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances. This states that for rainfall intensities, used in assessing surface water flood risk, both the central (20%) and upper end (40%) allowances should be assessed to understand the range of impact. The updated Road Drainage Strategy [REP2-009] states in 3.24 that an allowance of 30% was used in the preliminary design of the road drainage basins. The updated Flood Risk Assessment (FRA) [REP3-008] states in 5.3.10 that the surface water flood risk assessment used an allowance of 40%. When the highway runoff was assessed using 40% allowance the basins were found to contain the design storm, with 250mm of freeboard being retained. In the event of a rainfall event exceeding the design storm (1 in 100 year +30%) exceedance routes have been identified to ensure excess water

		does not flow towards vulnerable properties. See also the Applicant's response to Written Question Fg.1.20 [REP2-031]. Consultation is continuing with the Environment Agency and Wiltshire Council and a meeting was held regarding these issues on 20th June 2019.
6.2.13	Fg.1.20: In response to point 6: Wiltshire Council is the statutory authority responsible for leading on groundwater flood risk management, therefore the methodology for the groundwater flood risk assessment should be agreed with Wiltshire Council, in addition to being agreed with the EA.	We recognise that Wiltshire Council is the lead local flood authority responsible for leading on groundwater flood risk management. Response 6 to Written Question Fg.1.20 [REP2-031] submitted at Deadline 2 stated that the climate change assessment method was agreed with the Environment Agency, which relates to liaison on the overall appropriate use of the Wessex Basin model. It is acknowledged that following submission of the draft groundwater modelling reports, review comments were received from Wiltshire Council in accordance with their role as lead local flood authority. Confirmatory work undertaken based on EA and WC comments was reported in AS-017 and final version REP3-018; and AS-018 and final version REP3-021 Deadline 3 Submission - 8.25 – Supplementary Groundwater Model Runs to Annex 1 Numerical Model Report. Information was also provided in AS-016 (final version REP3-017) and AS-019 (final version REP3-020).
6.2.14	Fg.1.21: The catchment adjacent to Blick Mead is reported to see an increase in runoff from 292l/s to 328l/s. The associated outfall is not attenuated via one of the DTAs. Whilst it is understood that the archaeology local to this catchment requires the ground to be saturated, there is no consideration in the strategy for any impact this increase in peak flow will cause on the River Avon.	The runoff rates, as shown in Appendix 11.3, Road Drainage Strategy [APP – 281], Figure 5.2: Blick Mead Drainage Catchment Comparison, define the scale of the discharge volumes based on the assessment undertaken for the illustrative design. This confirms that the highway runoff volume discharging to the existing highway drainage ditch (located to the north of Blick Mead) will be maintained. The variance in the preliminary design, (36l/s approximately 12%) will be addressed within the detailed design of the highway drainage network to ensure that the surface water volume to the retained highway drainage ditch remains the same, prior to discharging to the River Avon. The remaining highway runoff discharging to the River Avon downstream from Blick Mead is controlled by the retention ponds located adjacent to Countess roundabout which provide a 20% betterment in discharge rate.

		Consultation is continuing with the Environment Agency and Wiltshire Council and a meeting was held regarding these issues on 20th June 2019.
6.2.15	Fg.1.25: These points have been discussed with Wiltshire Council, however no further modelling outputs or updated FRA has been received to date.	The updated FRA [APP-283] was provided to Wiltshire Council at Deadline 3 (31st May). The updated pluvial modelling was issued to Wiltshire Council's peer reviewers (Atkins) on 12th June 2019.
6.2.16	Fg.1.37: The Non-statutory technical standards for sustainable drainage systems (March 2015) requires the following - "S9. The design of the site must ensure that, so far as is reasonably practicable, flows resulting from rainfall in excess of a 1 in 100 year rainfall event are managed in exceedance routes that minimise the risks to people and property". The peer review found that "it is likely that detailed design will impact on existing overland flow routes". Wiltshire Council is awaiting the overland flow route information.	The illustrative design has been undertaken in accordance with the guidelines given in the Design Manual for Roads and Bridges, with the uplift allowance for global warming increased to 30% and the design tested for + 40% allowance for global warming as detailed in response to Written Question Fg. 1.20 [REP2-031].. Exceedance flow routes from each of the Drainage Treatment Areas (DTA) have been assessed based on the existing topography and with the proposed landscape mitigation which minimizes the risks to people and property. Consultation is continuing with the Environment Agency and Wiltshire Council and a meeting was held to discuss these issues on 20th June 2019. It was agreed that further details are to be provided to both the Environmental Agency and Wiltshire Council.
6.2.17	LV.1.9: Wiltshire Council is disappointed that all of the requested additional photomontages will not be provided. The Council is of the opinion that HE should attempt to get landowner permission to enable the visuals to be prepared as just because it is not currently public access, is not a valid reason to not get the view point recorded. The Council is concerned with potential adverse impact on setting and inter relationships between heritage assets.	At ISH3: Landscape and Visual and Design (7th June 2019), the Applicant stated that the additional photomontages requested in Written Question LV.1.9 and the ability to undertake them is being reviewed to produce more images where possible. The Applicant will update the Council on this, once further information is available.

6.3	Comments on draft development consent order	
	Matter Raised	**Highways England's Response**
6.3.1	**Part 1 Preliminary** Interpretation (Article 2) As stated within Wiltshire Council's response to the first round of ExA questions, a clear definition of ancillary, enabling and preliminary works would be helpful. Additionally, a definition for the maintenance and promotion of good health for tree and hedgerow plants would be useful. Furthermore, the Council believes that a definition for "replacement land" should be included. The Council is of the opinion, as stated within its response for the first round of ExA questions, that the definitions for "the authorised development", "commence" and "maintain" will also require amendment during the Examination.	In respect of ancillary works, please see the Applicant's comments on Wiltshire Council's response to Written Question DCO.1.2 [REP3-016]. The preliminary works are clearly defined in paragraph 1 of Schedule 2. In respect of the inclusion within the definition of "maintain" matters pertaining to the maintenance of soft landscaping, please see the Applicant's comments on Wiltshire Council's response to Written Question DCO.1.15. In respect of a definition for "replacement land" this is contained in article 34 (5). As the term is used only in that article statutory instrument drafting conventions support it being defined in the article to which it is used. See the Applicant's comments on Wiltshire Council's response to Written Question DCO.1.54 [REP3-016]. In relation to the second paragraph in connection with the definitions of "authorised development", "commence" and "maintain" please see the Applicant's summary of its oral submissions from ISH1 regarding the DCO, item 3.3, submitted at Deadline 4.
6.3.2	**Part 1 Preliminary** Disapplication of Legislative Provisions (Article 3) Wiltshire Council commented on the disapplication of legislative provisions relating to land drainage consenting within its written representation submitted at Deadline 2. Article 3 (1) (b), (c) and (d) relate to the disapplication of sections of the Land Drainage Act 1991. The Council is in agreement with the disapplication of land drainage consenting for normal construction activities but does not agree to the disapplication of land drainage consenting for the discharge of abstracted water for dewatering related	The Applicant notes that the regulation of the discharge of water is not within the remit of Wiltshire Council as lead local flood authority. That matter falls to be regulated by the Environment Agency under the Environmental Permitting (England and Wales) Regulations 2016. The Applicant does not seek the disapplication of the 2016 regulations in respect of water discharge or groundwater discharge activities and should it require the discharge of water it would need to obtain an environmental permit to do so. None of the matters to be disapplied in article 3 relate to the discharge of water or the abstraction of groundwater. The Applicant does not propose wide scale dewatering, please see the Applicant's comments on Wiltshire Council's response to Written Question DCO.1.7 [REP3-016]. If any limited dewatering is required beyond the existing

	to the tunnel construction. The issue of large scale dewatering is wide-ranging in its impact. It affects flood risk, water quality, ecology, water resources and archaeology. Discussions are ongoing with Highways England and the Environment Agency to progress this, along with the protective provisions. The Council will align its approach with the Environment Agency's on environmental permitting.	thresholds for exemption the Applicant would be required to obtain an abstraction licence from the Environment Agency under section 24 Water Resources Act 1991. The Applicant removed its proposed disapplication of the requirement to obtain an abstraction licence in revision 1 of the draft development consent order submitted at deadline 2 [REP2-003]. The Applicant has reached agreement with the Environment Agency on protective provisions and will continue negotiations with Wiltshire Council on the protective provisions for drainage authorities. The Applicant understands that the Council's principal concern here is with the flooding implications of discharge of water from dewatering. The Applicant intends to secure the use of closed face tunnelling techniques in the updated version of the OEMP to be submitted at Deadline 4. The Applicant understand that this is likely to remove the Council's concerns in this area and will be confirming that direct with them.
6.3.3	**Part 2 Works Provisions** Development consent, etc. granted by the Order (Article 4) The Council would suggest a minor amendment to the wording within this sub-clause (1), so that it states "…for the authorised development *to be carried out within the Order limits*."	As discussed at ISH1 regarding the DCO, the Applicant is considering whether revisions to article 4 are justified in Revision 3 of the draft development consent order. Please refer to the Written Summary of Oral Submissions for that hearing submitted at Deadline 4 for the Applicant's response.
6.3.4	**Part 2 Works Provisions** Maintenance of the authorised development (Article 5) The Council recommends that a sub-clause (2) is added to this article which states "*Paragraph (1) does not extend to any maintenance works which would give rise to any materially new or materially worse environmental effects from those assessed in the environmental statement*."	The Applicant considers this proposed amendment to be unnecessary as the full extent of maintenance permitted under this article has been assessed in the Environmental Statement. See the Applicant's response to Written Question DCO.1.12(iii) [REP2-030].

6.3.5	**Part 2 Works Provisions** Limits of Deviation (Article 7) The Council has expressed concern regarding the proposed limits of deviation. Please see the Council's response to ExA question DCO.1.30.	The Applicant has commented on Wiltshire Council's response to Written Question DCO.1.30, please see [REP3-016].
6.3.6	**Part 2 Works Provisions** Temporary stopping up and restriction of use of streets (Article 11) It is not possible to temporarily stop up a highway. Despite this approach being taken from precedent documents (including the Advice Note on the drafting of DCOs), the Council believes that it is wrong, and should be amended. Known errors should not be perpetuated.	The Applicant acknowledges that, in Highways Act 1980 terms, "stopping up" is understood to be a permanent extinguishment of a highway. However, the development consent order if made, would be made under the Planning Act 2008 and the bespoke concept of temporary stopping up, separate from stopping up under the Highways Act, is well established under that regime. This is because it offers a more proportionate approach than permanent stopping up. The term "temporary stopping up" is used in article 11 of the Infrastructure Planning (Model Provisions) Order 2009 upon which article 11 of the draft development consent order is based. The term has been used in the majority of highways development consent orders.
6.3.7	**Part 2 Works Provisions** Motor Vehicle Restrictions (New Addition) Wiltshire Council suggests that a new article is added into the draft DCO, which could be situated as a new Article 12, to cover motor vehicle restrictions on specified byways. *The suggested wording is detailed in Wiltshire Council's Comments on dDCO, pages 3, 4 and 5 [REP3-046].*	Please see the Applicant's summary of oral representations made at ISH6 in relation to this proposal.
6.3.8	**Part 2 Works Provisions** Discharge of water (Article 13) The Council suggests that the following amendments are made to sub-clause (6) of this Article, "…Regulations 2016, *or land drainage consent under section 23 of the Land Drainage Act 1991*." It is also imperative that the Council is engaged in its role as LLFA in this regard.	The Applicant notes that section 23 of the Land Drainage Act 1991 relates to obstructions within an ordinary watercourse and does not relate to the discharge of water into the water environment, which is regulated by the Environment Agency under the Environmental Permitting (England and Wales) Regulations 2016. Article 13(6) already makes it clear that nothing in article 13 would override the requirements of those regulations. Consequently, the Applicant does not consider the suggested amendment to be appropriate. The Applicant will continue to discuss the protective provisions for drainage authorities with Wiltshire Council

	Furthermore, monitoring will be required of water quality. It is possible that dilution of watercourses may occur with phosphates suspended in chalk and affect nitrogen levels. This would be governed by the Water Framework Directive (EU Directive).	which will make provision for all appropriate engagement and approvals by the Council as LLFA. In relation to water quality, again this is a function of the Environment Agency and the OEMP [REP3-006] includes adequate and appropriate measures to protect surface waters, see references MW-WAT1, MW-WAT2, MW-WAT3, MW-WAT4, MW-WAT5, MW-WAT6, MW-WAT7 and MW-WAT15.
6.3.9	**Part 2 Works Provisions** Protective works to buildings (Article 14) The Council would suggest some minor wording amendments at sub-clause 4(b) to this Article, so that it would read "…adjacent land ~~*(whether or not such adjacent land is inside or outside the Order limits)*~~ but not including any building erected on it." The Council also queries the powers granted to the undertaker at sub-clause 4(b) to this Article, specifically "*…and if it is reasonably required, the undertaker may take possession, or exclusive possession, of the building and any land or part thereof for the purpose of carrying out the protective works.*", as this goes beyond the powers granted in other DCOs.	Please see the Applicant's response to Written Question DCO.1.35 and its summary of oral representations at ISH1 regarding the DCO for the detailed justification for the inclusion of this provision and its application outside of Order limits. In summary, the provision is considered appropriate in the circumstances of this Scheme on a precautionary basis should new development come forward that would require protective works. The approval of the justification for such provisions can be seen in made orders including article 18 of the A14 Cambridge to Huntingdon Improvement Scheme Development Consent Order.
6.3.10	**Part 2 Works Provisions** Authority to survey and investigate land (Article 15) The Council would suggest some minor wording amendments at sub-clause 1(b) to this Article to state "…Order limits, *affected by the authorised development*".	The Applicant is not clear on what is intended to be achieved by the proposed amendment to article 15(1)(b)(i). The Applicant considers the drafting to be clear in the draft development consent order [REP3-002] that entry may only be made under this article "for the purposes of this Order" which applies to sub-paragraphs (a) and (b) and would appear to have the substantially the same effect as the drafting proposed. If this does not address the concern, the Applicant would be happy to discuss further with Wiltshire Council.
6.3.11	**Part 2 Works Provisions** Felling or lopping of trees and hedgerows (Article 17) The Council believes that the following should be added into sub-clause (2) so that it reads "…such activity *and take steps to avoid a breach of the*	The Applicant has considered this suggestion and concludes that it is not necessary to specify that the general law, including the Wildlife and Countryside Act 1981 and the Conservation of Habitats and Species Regulations 2017, would continue to apply. Nothing in the DCO would cause the legislation cited to be disapplied.

	Wildlife and Countryside Act 1981 and the Conservation of Habitats and Species Regulations 2017 or any successor act and regulations".	
6.3.12	**Part 2 Works Provisions** Maintenance of drainage works (Article 18) Please see comments made by the Council in its response to the ExA's question DCO.1.40.	The purpose and effect of article 18 is to maintain the status quo with regards to the liability to maintain drains, see the Applicant's response to Written Question DCO.1.39 [REP2-030].
6.3.13	**Part 2 Powers of Acquisition and Possession of Land** Compulsory acquisition of land – incorporation of the minerals code (Article 20) The Council suggests that an additional sub-clause (c) is added to this Article which states: *(c) for "undertaking" substitute "authorised development"*.	The Applicant considers the suggested amendment is unnecessary. The definition of "undertaking" in the minerals code is sufficiently clear that it would cover the matters that would be approved under the DCO, if made. The article, as currently drafted, has precedent in other made development consent orders.
6.3.14	**Part 2 Powers of Acquisition and Possession of Land** Compulsory acquisition of rights (Article 22) Please see comments made by the Council in its response to the ExA's question DCO.1.44.	Please see the Applicant's comments on Wiltshire Council's response to Written Question DCO.1.44 [REP3-016].
6.3.15	**Part 4 Interpretation** Special category land (Article 34) Please see comments made by the Council in its response to the ExA's question DCO.1.54.	Please see the Applicant's comments on Wiltshire Council's response to Written Question DCO.1.54 [REP3-016].
6.3.16	**Part 4 Operational Provisions** Classification of roads, etc. (Article 47) Wiltshire Council will be entering into a side agreement with Highways England. In order to protect the Council from potential conflicts between	The Applicant understands that Wiltshire Council's underlying concern is to ensure that any provision agreed in the side agreement regarding the date on which the detrunking takes effect is not overridden by the drafting of article 47(6)). The Applicant addressed this concern through a revision to article 47(6) in revision 2 of the draft development consent order [REP3-002] which

	the DCO and side agreement, amendments to the wording of sub-clause (6) is required. It is proposed that it should state: "*After bringing ~~On such day as the undertaker may determine~~* the roads described in Part 9 (roads to be de-trunked) or Schedule 9 *into a condition which is to the reasonable satisfaction of the local highway authority, and on such day as the undertaker may determine, the roads described in Part 9 (roads to be de-trunked) of Schedule 9* are to cease to be trunk roads as if they had ceased to be trunk roads by virtue of an order made under section 10(2) of the 1980 Act specifying that date as the date on which they were to cease to be trunk roads. *The undertaker may only make a determination for the purposes of paragraph 47* *(6) with the consent of the Secretary of State, who must consult the local highway authority before deciding whether to give that consent.*"	acknowledges that any agreement between Wiltshire Council and the Applicant on the timing of when the detrunking occurs, would take precedence over the provision in the Order. In respect of the maintenance liability associated with roads to be de-trunked, this is addressed in article 9 of the DCO and the Applicant will consider, in the context of the ongoing negotiations on the legal agreement, whether equivalent amendments to article 9 are appropriate. The Applicant considers that the proposed additional drafting, which would require the Secretary of State's consent to de-trunking, is unnecessary. Once the Secretary of State has approved the de-trunking by making the Order, the timing of when it takes effect ought to be a matter as between the two relevant highway authorities and should not require a further decision of the Secretary of State.
6.3.17	**Part 4 Operational Provisions** Traffic regulation measures (Article 48) Please see comments made by the Council in its response to the ExA's question DCO.1.58.	Please see the Applicant's comments on the Wiltshire Council's response to Written Question DCO.1.58 [REP3-016].
6.3.18	**Part 5 Miscellaneous and General** Consents, agreements and approvals (Article 59) The Council has concerns regarding the deemed consent provision within sub-clause (2) of this Article. Further discussion will be required during the Examination to address this.	The Applicant looks forward to discussing Wiltshire Council's concerns regarding this provision during the course of the examination. The deemed consent provisions are justified by the imperative to deliver projects of national significance, which means that obtaining of approvals cannot be left to an indeterminate period controlled by the approver. The approval of that justification is evidenced by the use of these kinds of provisions in a wide range of made development consent orders.
6.3.19	**Schedule 3 Permanent Stopping Up of Highways and Private Means of Access and Provision of New Highways and Private Means of Access** Part 2 Highways to be Stopped Up for which No Substitute is to be Provided	The measurement of 410m is the chainage length of the Allington Track, 388m is a straight line "as the crow flies" measurement. Like all measurements of highway lengths in Schedule 3 the Applicant has adopted the chainage length rather than the straight-line length. The Applicant understands Wiltshire Council to be referring to the section of the existing Allington Track to be stopped up from its junction with the existing A303 for a distance of 430 metres in a generally south-easterly direction. The

	The Council queries whether Allington Track should be classified as Part 2 or Part 1, given that a substitute road is going to be provided via Equinox Drive. Furthermore, the stated length of 410m is queried, as a Google map measure indicates the length to be circa 388m.	Applicant considers this stretch of existing road to be no longer required given the need for its closure being necessary to improve safety on the existing A303 by avoiding slow moving traffic coming into conflict with faster moving traffic on the A303. While it is noted that an alternative route is provided, through the Allington Track re-alignment and its connection to Equinox Drive, which would in turn provide access to the Countess Roundabout and the rest of the local road network, the Applicant considers this stopping up to be justified on its own merits.
6.3.20	**Schedule 9 Classification of Roads Etc.** Part 1 The New and Improved A303 Trunk Road At the beginning of Part 1, it states “an 11.7 kilometre length of new road” but then refers to “an 11.6km length of new road” in sub-clause (1). The Council believes that these measures should be checked as it appears that one of them must be incorrect. Furthermore, the total measures referenced in sub-clauses (1) (b), (c), (d), (e), (f), (g), (h) and (i) total 11.51km. Whilst, the Council has not identified the error, there is clearly something incorrect here, with an error of up to 190m based on the stated figures	The Applicant reviewed the measurements referred to in Part 1 of Schedule 9 and made minor corrections in revision 2 of the draft development consent order, submitted at Deadline 3 [REP3-003].
6.3.21	**Schedule 9 Classification of Roads Etc.** Part 2 The New Longbarrow Junction and the Slip Roads The Council believes that the word “bifurcated” is misapplied in sub-clause (2) of Part 2 and the description in Part 6, The New Countess Junction Slip Roads, sub-clause (14). The slip road is not bifurcated but either merges with or diverges from the A303 mainline.	The Applicant notes considers the use of the word "bifurcate" is apposite and reflects the splitting/joining of the diverge/merge and used in this context, the term “bifurcated” has precedent in other made Orders. Nonetheless, the Applicant has reviewed Schedule 9 and removed the word "bifurcate".
6.3.22	**Schedule 9 Classification of Roads Etc.** Part 3 The New Longbarrow Junction and Link Roads The Council wishes to inform the ExA that with regard to sub-clause (9), the 610 metre length of new road has been recorded by the local highway	The Applicant welcomes Wiltshire Council's confirmation of the classification number for the highway described in paragraph 9 of Schedule 9 and in the next iteration of the draft development consent order will replace the "(new number to be confirmed)" drafting with the road classification number now allocated.

	authority as the C507 and therefore should be referenced as such within the draft DCO.	
6.3.23	**Schedule 9 Classification of Roads Etc.** Part 4 The New Rollestone Cross With respect to sub-clause (10), the Council does not consider that the point 2.97 km north of the existing Longbarrow roundabout is a logical point from which to measure. It is suggested that measurement is taken from Airmans Roundabout instead.	The Applicant notes the Council's preference but considers the point of reference to be accurate and appropriate.
6.3.24	**Schedule 9 Classification of Roads Etc.** Part 6 The New Countess Junction Slip Roads Please see comment on the use of "bifurcated" in Part 2 The New Longbarrow Junction and the Slip Roads above.	Please see the corresponding response above.
6.3.25	**Schedule 9 Classification of Roads Etc.** Part 7 The Existing A303 With regard to sub-clause (18), the Council suggests that the wording is modified as follows "…to be *dreclassified* ~~*as a C class road*~~ from a point…". The classification of roads plan should be amended accordingly. Furthermore, in sub-clause (20), the wording should be amended to state "…C class road ~~*(new number to be confirmed)*~~ *and recorded by the local highway authority as the C507*, commencing…". The classification of roads plan should be amended accordingly.	The Applicant understands that the proposed amendment seeks to ensure that the road described in paragraph 18 of Schedule 9 is de-trunked. No changes are necessary to achieve this purpose as provision for the relevant length of highway (i.e that which is described in paragraph 18 of Schedule 9) to be de-trunked is already made in Part 9 of Schedule 9 and shown on the De-Trunking Plans [APP-015] and given effect by article 47(6). Roads to be de-trunked are shown on the De-Trunking Plans [APP-015] and not the Classification of Roads Plan [APP-016]. As previously noted, the Applicant will insert the road's new classification number now that it has been confirmed by Wiltshire Council.
6.3.26	**Schedule 9 Classification of Roads Etc.** Part 9 Roads to be De-Trunked	This matter remains under discussion between the Applicant and Wiltshire Council; the Applicant is minded to seek to accommodate Wiltshire Council's proposal.

	As outlined within the Council's written representation submitted at Deadline 2, the Council considers that changes to this section are required. If incorporated, amendments would also be required to be made to the de-trunking plans. The Council suggests that sub-clause (22) is amended to state "…on sheet 1 of the de-trunking plans, *including the layby to the west of Scotland Lodge Farm*, …". Furthermore, the Council suggests that an additional sub-clause (23) is added as follows "*The circulatory carriageway, verges and central part of the Countess Roundabout, as shown on sheet 3 of the de-trunking plans.*"	
6.3.27	**Schedule 10 Traffic Regulation Measures** <u>Part 1 Speed Limits</u> The Council queries the specified distance of 12.25 kilometres within the traffic regulation measures plans (speed limits) – sheets 3 and 4, as it appears to be incorrect. 890 metres plus 285 metres equals 1.175 kilometres. Furthermore, the Council argues that the traffic regulation measures plans (speed limits) – sheets 4 and 5 will need to be amended, as west of the Longbarrow Roundabout junction the de-trunked road is suitable for National Speed Limit (60 miles per hour). The Council suggests that the wording is amended as follows: "Existing A303 Trunk Road *(and part of new road link to Longbarrow Junction)* Between…at Winterbourne Stoke and *a point 70m to the west of ~~the centre point of~~ its junction with* the southern… *New road (part) linking Longbarrow Junction to Winterbourne Stoke* *From its junction with the southern roundabout at the new Longbarrow Junction for a distance of 70m in a generally westerly direction*." The Council considers that the description for the Link Road between Allington Track and Equinox Drive (the traffic regulation measures plans	Wiltshire Council's distance calculation (890 metres plus 285 metres equals 1.175 kilometres) overlooks the fact that on the drawing which corresponds to this DCO Schedule (i.e. the Traffic Regulation Measures Plans (Speed Limits)) the length of A303 running between the two reference points, to which the distances of 890 metres and 285 metres relate, does not follow a straight line "as the crow flies". The distance measurement given in the Schedule is longer because the route of the A303 is indirect, with twists and turns, dipping south and rising north, and as with all measurements of highway lengths in the DCO Schedules, the Applicant has measured the highway (or chainage) length rather than the straight-line length between reference points. However, the Applicant has checked the measurement and notes that 12.25 kilometres is a typographical error. The measurement should read 1.2 kilometres and has been corrected to read as such in the updated version of the draft development consent order submitted at Deadline 4. With respect to the description of the length of road comprised in the new Allington Track link that would be subject to a 30 miles per hour speed limit, the Applicant considers it to be clear within the constraints of the well-precedented approach in statutory orders to the drafting of such descriptions, which seek to rely upon existing points of reference. The Applicant is content to consider any alternative descriptions within those constraints. With respect to the 410m length referred to in Schedule 3 in respect of the Allington Track link, please see the Applicant's response above. In summary

	(speed limits) – sheet 11) is a poor description of the new road and should be amended. Furthermore, measures need to be checked. If it is compared with the Schedule 3 Part 3 reference that 410m (challenged) of Allington Track is to be stopped up, it seems logical that the same measure should apply to the start point of the diverted road. Furthermore, the Council asserts that the speed limit for this road should be national speed limit (60 miles per hour). With respect to the New Rollestone Cross junction (traffic regulation measures plans (speed limits) – sheet 13), the Council is of the view that the speed restriction here may be inappropriate, and the bend flagged by way of advance warning signs and markings. It reserves its position with a view to maintaining a 50 miles per hour speed limit through the junction.	410m is the correct length when measured along its chainage, as against how the crow flies. With respect to each of the Council's suggestion regarding speed limits. These are noted by the Applicant and have been discussed with the Council. The matters raised by Wiltshire Council do go beyond drafting matters and extend to changes to the Scheme. The Applicant is discussing the proposed changes with Wiltshire Council.
6.3.28	**Schedule 11 Protective Provisions** Part 3 For the Protection of Drainage Authorities Wiltshire Council and the Environment Agency are in discussions with HE regarding the protective provisions. Whilst negotiations are at an early stage, substantial amendments to these provisions are anticipated to be required	The Applicant notes that protective provisions were agreed with Environment Agency shortly after Deadline 3 and looks forward to agreeing protective provisions with Wiltshire Council in due course.
6.3.29	**Requirements and the Outline Environmental Management Plan (OEMP)** As set out in Wiltshire Council's submitted Local Impact Report (Deadline 1), the Council believes that additional controls are necessary in order to exercise its statutory functions as local planning authority, local highway authority, and lead local flood authority. The Council is broadly supportive of Highways England's (HE) proposed approach of high-level requirements within the draft DCO with the detailed control mechanisms contained within the Outline Environmental Management Plans (OEMPs), which will be transposed into the Construction Environmental Management Plans (CEMPs). Upon	The Applicant welcomes Wiltshire Council's approach and, as it notes, updates were made to the OEMP at deadline 3 [REP—006] to take into account matters including the outcomes of the ongoing discussions between the parties. The Applicant welcomes the general acceptance of the Council at ISH1 regarding the DCO that the updated OEMP seemed to address many of the Council's concerns. A further update of the OEMP is submitted at Deadline 4. The Applicant looks forward to discussing further with a view to finalising the terms of the OEMP.

	reflection, it may be possible to incorporate some of the controls identified within the LIR into either the OEMP (including for incorporation into the CEMPs) or side agreement, which is being negotiated with HE, with the remaining items being retained as additional requirements in the draft DCO. If measures are to be included with the OEMP, changes to the existing provisions within the document will be required and the Council awaits the revised OEMP for review (it is understood that this will be submitted into Examination at Deadline 3) prior to finalisation of its position on these matters.	
6.3.30	However, in respect of the some of the proposed plans (e.g. the CEMP and the Detailed Archaeological Mitigation Strategy), the Council's current view is that it is likely to be inappropriate for HE to be responsible for approving its own proposals, whereas provided the OEMP / CEMP sets appropriate parameters (the Council hopes the revised OEMP will help to identify the parameters), and as long as there is appropriate consultation with the Council and the product of that consultation is conscientiously taken into account, some plans may be able to be approved by HE whilst others may need to be approved by the relevant planning, highway, drainage etc. authority. The Council is currently in discussions with HE as to the methodology of consultation within this project, the outcome of which (together with the revised OEMP) will assist the Council in reaching a definitive view on these issues.	Please see the Applicant's summary of its oral submissions on this point at ISH1 regarding the DCO. In summary, the CEMP will be approved within the detailed framework of the OEMP, which, like the DAMS, will be approved by the Secretary of State in the making of the Order. It is the Applicant's intention to work with Wiltshire Council and other key stakeholders to agree the contents of the OEMP and the DAMS during the course of the examination.
6.3.31	It is the Council's current understanding that with respect to any requirement which requires details to be submitted to the Secretary of State for approval following consultation with another party, the details submitted must be accompanied by a report setting out the consultation undertaken by HE to inform the details submitted along with HE's response to that consultation, and enclosing a copy of all consultation responses received. This report should also be provided to the relevant consultees. The report should state how the comments have been addressed within the details submitted, or if not incorporated, the reasons why any requests made in consultation responses have not been included within the submitted details. The Council suggests that	A new requirement 11 was included in Schedule 2 in the revision 2 of the draft development consent order [REP3-002] which has substantially the same effect as that requested by Wiltshire Council. With respect to paragraph 13 of Schedule 2, which sets out the process that applies where the Secretary of State requires further information in order to determine an application to him or her under a requirement; the Applicant notes that these provisions are justified by the need to deliver projects of national significance without delay resulting from approvals which are subject to no deadline. This justification and the use of the ten-business day period has been endorsed in numerous Highways England DCOs made by the Secretary of State (who is also of course the approving authority). The Applicant is not aware of this

	this is included as an additional requirement within the DCO. However, it is also noted that the timescales for approval / determination by the Secretary of State as set out in Schedule 2 Part 2 of the draft DCO only grant the Secretary of State 10 working days to request further information. The Council is concerned that the times stated may not be sufficient, if the Secretary of State determines that further consultation with the LPA is required. Furthermore, the Council believes that it should be explicitly stated who the report shall be written by and to provide a definition of materially new or materially worse environmental effects.	timescale causing problems for the Secretary of State on any other DCO schemes. Furthermore, the Applicant notes that the drafting would allow requests after the 10 business days period with the agreement of the Applicant. The phrase "materially new or materially worse adverse effects" is designed to cover a variety of different circumstances and so further definition would risk prejudicing its purpose. In any event the Applicant considers its meaning to be well-understood and not require further definition.
6.3.32	In respect of the CEMP, it is the Council's current view that this should be approved by the Secretary of State in consultation with the Council. In respects of the DAMS, it is the Council's view that this should be approved by the Council as LPA in consultation with the relevant heritage partners. Given its familiarity with National Planning Policy, the Core Strategy and the WHS Management Plan and traffic issues, the Council as LPA is best placed to balance the competing public interests of transport needs and cultural heritage needs and to provide transparency in the decision-making process. The Council's current view is that these matters should be included as requirements.	The Applicant remains of the view that it is the appropriate body, in consultation with key stakeholders in respect of their functions on topics of relevance to their functions and within the detailed framework of the OEMP [REP3-006] already approved by the Secretary of State via the making of the Order, to approve the contractors' CEMP(s). In respect of the DAMS, the Applicant is not sure of the Council's reasoning behind proposing its approval of the document, which seems inconsistent with its proposal that the Secretary of State should approve both the OEMP and the CEMP. The Applicant's view remains that the Secretary of State is the appropriate approver of a document of the importance of the DAMS, following what the Applicant intends will be its agreement among the Council, the Applicant and the other heritage stakeholders during examination. Please see the Applicant's summary of oral representations made at ISH1 regarding the DCO.
6.4	**Comments on Draft Detailed Archaeological Mitigation Strategy (DAMS)**	
	Matter Raised	**Highways England's Response**
6.4.1	<u>Deposition of Tunnel Arisings at Parsonage Down East</u> The Scheme proposes to deposit the arisings from the tunnel boring within this area of the landscape outside the WHS. It is proposed to preserve known archaeological features beneath the spoil from the tunnel and to create a chalk grassland habitat. The spoil will arise from	See the Applicant's written summary of oral submissions made in relation to agenda item 8.1 of ISH4 regarding waste and materials management, submitted at Deadline 4. Further information was supplied to Historic England and Wiltshire Council on 17th June.

	the tunnel boring machine as slurry, which will then be treated and redeposited. The Council currently has insufficient information to agree the proposed approach for landscape fill set out in section 4.2.9. Additional information has been requested by the Council and Historic England and until this has been made available and agreed a robust 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.	Highways England continues to engage with the Council and Historic England in relation to the deposition of tunnel arisings and other excavated materials within the Parsonage Down East deposition area. A meeting to discuss these issues with the Council was held on 19 June 2019. Discussions continue with regards to the issues.
6.4.2	Mitigation of Main Road Line Outside the WHS The Council's view is that the current mitigation measures proposed outside of the WHS are not extensive enough. For example, the whole of the road line outside of the WHS (including junctions and slips roads) should be subject to some form of mitigation. This needs to be reflected in section 4.2.4 and Appendix E fieldwork action areas. The Council's concern is the high risk of discreet archaeological remains, some of which may have attributes of Outstanding Universal Value, being present but not detected in the evaluation process.	See the Applicant's written summary of oral submissions made in relation to agenda item 7 of ISH2 regarding the Detailed Archaeological Mitigation Strategy (DAMS), submitted at Deadline 4. Highways England continues to engage with the Council to agree mitigation requirements outside the WHS that are reasonable and proportionate to the significance of the heritage assets likely to be encountered, based on the results of the comprehensive archaeological evaluation programme that has been completed. A meeting to discuss these issues with the Council took place on 19 June 2019. Discussions continue with regards to the issues.
6.4.3	Sampling Approach and Excavation A robust methodology needs to be agreed for further assessment and mitigation of artefacts in the topsoil in areas to be excavated, as referred to in section 4.3.5 and 5.3.11-13. Further information on the nature and extent of lithics from the evaluation phase has been requested from Highways England. This information has been presented to the Council and HMAG in draft form and made some proposals for further work at mitigation stage, which are yet to be agreed. In addition, a robust strategy for sampling natural features such as tree hollows also needs to be agreed and approved. Further information has been sought from Highways England and this is in the process of being presented to HMAG. Section 5.3 sets out the general machine excavation approach. 5.3.4 refers to monitoring of machine striping be undertaken by a qualified	See the Applicant's written summary of oral submissions made in relation to response detailed in agenda item 7 of ISH2 regarding the Detailed Archaeological Mitigation Strategy (DAMS), submitted at Deadline 4. Highways England continues to engage with the Council and other HMAG members to agree mitigation requirements that are reasonable and proportionate to the significance of the heritage assets likely to be encountered, based on the results of the comprehensive archaeological evaluation programme that has been completed. In response to ongoing consultation since the Deadline 2 submission of the draft DAMS [REP2-038], a detailed consideration of the significance and distributions of artefacts in the topsoil and the distribution and artefact content of tree hollows, as demonstrated by the evaluation results, was submitted at Deadline 3 [REP3-024]. This report identifies 5 areas of artefact concentrations where further investigation would be proportionate and reasonable and proposes a system for investigating these concentrations as part of the archaeological mitigation, as the

	archaeologist. The Council would emphasise that this task is one of the most important in the whole mitigation programme and the archaeologist(s) undertaking it must not only be qualified but also highly experienced. The level of sampling of features referred to in section 5.3.26-36 needs to be agreed and approved. A minimum percentage of sampling for all likely feature types should be set out in the DAMS but subject to refinement on site during monitoring visits.	basis for further consultation with the Council and other HMAG members. An approach to the investigation of tree hollows is also proposed. These more detailed proposals are reflected in an updated draft DAMS submitted at Deadline 4. In both regards, work is continuing to identify a suitable 'intelligent' sampling strategy. A meeting to discuss these issues with the Council and other HMAG members was held on 19 June 2019. A meeting of the Scientific Committee is scheduled for 2 July 2019. Discussions are ongoing. The comment on machine stripping is noted. This requirement is reflected in an updated draft DAMS submitted at Deadline 4. The level of sample excavation of features set out in the draft DAMS is qualified in paragraph 5.3.29 as follows: 'The following minimum sampling requirements will be used as a generic standard, within the iterative excavation sampling strategy; these may be varied to suit the research value of the remains, subject to consultation with HMAG/ WCAS and the TPA: the SSWSI will identify the appropriate sample for excavation.'
6.4.4	Treasure The procedure for dealing with the unexpected discovery of treasure items (referred to in section 5.3.73) must include promptly informing the Wiltshire Finds Liaison Officer for the Portable Antiquities Scheme and the Wiltshire Archaeology Service.	Comment noted. This requirement is reflected in an updated draft DAMS submitted at Deadline 4.
6.4.5	Contingency and Procedure for Dealing with Unexpected Discoveries There needs to be a robust contingency policy in place to deal with unexpected discoveries which are significant and will require further mitigation, not only for the preliminary works stage but for the main works. This is referred to briefly in sections 4.1.15, 5.1.2 and 5.1.15-17. This policy needs to be developed and expanded in detail and approved within the final version of the DAMS. It is imperative that the policy for dealing with this during main works phase is agreed in the DAMS and as well as the CEMP.	See the Applicant's written summary of oral submissions made in relation to agenda item 7 of ISH2 regarding the Detailed Archaeological Mitigation Strategy (DAMS), submitted at Deadline 4. The approach to unexpected finds made during the preliminary works or main works stages is set out at paragraphs 5.1.15 to 5.1.7 of the draft DAMS submitted at Deadline 2 [REP2-038]. This confirms that a site consultation meeting(s) will be convened between the Archaeological Contractor, HMAG/ WCAS and the TPA to consider the significance of the find. Depending on the outcome of the consultation meeting, an addendum to the SSWSI or a new SSWSI will be prepared by the Archaeological Contractor in consultation with HMAG/ WCAS.

		This addendum or new SSWSI will set out the work required and the timescale for completion of this work. The procedure for dealing properly with any unexpected finds during the construction process (preliminary or main works) will be agreed with the Employer and recorded in the CEMP (as required by the OEMP). The DAMS and OEMP will be secured as Requirements of the DCO. These Requirements will commit Highways England to delivering the required archaeological works. The Applicant considers that the DAMS and OEMP as drafted provide the necessary controls to ensure that unexpected discoveries are dealt with properly. The Applicant does not consider that any specific contingency provision is required, or can reasonably be made, in the DAMS or the OEMP regarding the resources required to deal with unexpected discoveries.
6.4.6	Interruptions and Delays Section 5.1.18 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. This section requires further detail. It is important to note here that the Council, as lead curator, must not only be informed if this is the case, but must also be able to monitor site conditions and require works to cease.	The OEMP and the DAMS provide for the appointment of an Archaeological Clerk of Works (ACoW) as part of the Employer's site team. The role of the ACoW will be to co-ordinate the archaeological site works to ensure that the DAMS and the OEMP are complied with. This will include monitoring of site conditions and management of interruptions and delays to the archaeological site works. The Applicant considers that, due to the ACoW's continuous presence on site, this provision is the most effective means of controlling site works such that damage to archaeological remains is avoided. The Council and other members of HMAG, as applicable, will be informed of the circumstances of any interruptions and delays and will have opportunity to input to decisions regarding cessation or resumption of work through the monitoring provisions described in section 7 of the draft DAMS [REP2-038].
6.4.7	Detailed Mitigation Measures by Scheme Area 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 section 4.3.2-6 will need to be revised.	Highways England continues to engage with the Council to provide the information requested and to agree detailed mitigation requirements that are reasonable and proportionate to the significance of the heritage assets likely to be encountered, based on the results of the comprehensive archaeological evaluation programme that has been completed. A meeting to discuss these issues with the Council was held on 19 June 2019. Discussions are ongoing.

6.4.8	Compounds The details of proposed ground works in each of the compound areas needs to be set out in the DAMS along with mitigations principles and measures. Given that some of the compounds contain significant archaeological features, and / or are near the WHS boundary, the mitigation details and protection of archaeological remains need to be agreed in advance of any consent for the scheme being given.	The principles and measures that will apply in respect of archaeological remains in compound areas are set out in paragraphs 4.2.14 – 4.2.15 of the draft DAMS [REP2-038]. The application of these in individual compound areas is addressed in an updated draft DAMS submitted at Deadline 4. A meeting to discuss these issues with the Council was held on 19 June 2019.Discussions are ongoing.
6.4.9	Temporary Roads and Haul Roads The detail of the exact location and construction methods for temporary and haul roads still needs to be agreed and approved.	The principles and measures that will apply in respect of protection of archaeological remains during construction, operation and removal of temporary roads and haul roads are set out in paragraphs 4.2.32 – 4.2.36 (temporary roads) and 4.2.17 – 4.2.24 (haul roads) of the draft DAMS [REP2-038]. The indicative locations of temporary roads and the proposed temporary all-weather haul road are shown on ES Figure 2.7 [APP-061]; temporary earthwork haul roads will be contained within the Scheme earthworks footprint and will be subject to the archaeological mitigation measures proposed for the areas traversed. A meeting to discuss these issues with the Council was held on 19 June 2019. Discussions are ongoing.
6.4.10	Strategy for Digital Data It is good to see this section (5.9) included in the draft DAMS. The proposed digital data management plan must include the provision of a timetable for the transfer of digital data to the Council's Historic Environment Record (HER) to enable the results of the fieldwork to be rapidly and accurately imported into the HER and the public record. This also needs to be reflected in the publication proposal in section 8.2.3. There needs to be an agreed and approved process for enabling the reports and digital datasets to be easily transcribed onto the HER.	Comment noted. These requirements are reflected in an updated draft DAMS submitted at Deadline 4.
6.4.11	Public Archaeology and Community Engagement The Council welcomes the inclusion of this section (4.4) in the draft DAMS and the strategy (Appendix F) which aims to deliver a legacy from the archaeological investigations undertaken for the Scheme. It is good to see the principles in place, although the details of the activities proposed, methods for delivery and timescales will have to be agreed	The Public Archaeology and Community Engagement (PACE) Strategy is set out in Appendix F of the draft DAMS [REP2-038]. Section F.14.6 sets out how 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, amongst others, during a scoping and consultation stage.

	and approved as part of the overall development of the DAMS during the Examination. The Council notes that section 5.1.14 states that the implementation of the strategy will fall to the archaeological contractor, but this has not yet been agreed and other means of delivery need to also be considered. It is also considered that the strategy must include site based activities (F14.2.2) and therefore the strategy and personnel to implement it must be in place at the start of preliminary works phase. Additionally, the strategy should have a stronger focus than as presently drafted on all the phases of archaeological work associated with the Scheme, including the initial assessment work for route selection and the evaluation phase of fieldwork. A greater focus on the World Heritage Site and issues of Outstanding Universal Value would be beneficial as would linking the strategy into work-streams of existing heritage education groups and networks.	The inclusion of site-based activities is provided for in paragraph 14.2.2 of the draft DAMS [REP2-038], these would be developed as part of the scoping and consultation stage. The Applicant acknowledges that it will be necessary to conduct the scoping and consultation stage in advance of commencement of the preliminary works. However, the Applicant does not consider that details of the activities proposed, methods for delivery and timescales can reasonably be agreed and approved as part of the overall development of the DAMS during the Examination. The requirements for the strategy and personnel to implement to be in place at the start of preliminary works phase, for a stronger focus on all the phases of archaeological work associated with the Scheme, and a greater focus on the World Heritage Site and issues of Outstanding Universal Value, are noted. The Applicant acknowledges that responsibility for implementation of the strategy remains to be agreed as part of the DAMS; the reference to the archaeological contractor's role is noted. A meeting to discuss these issues with the Council and other members of HMAG was held on 19 June 2019. Discussions are ongoing.
6.4.12	<u>Approval and Sign-Off of Archaeological Mitigation Works</u> The Council is pleased to see the Communication Strategy in section 2 and Appendix A setting out the process of approvals and sign-off areas of archaeological mitigation. Some of the detail here needs further development and clarification to make the procedure for sign-off and compliance as robust as possible and to secure the Council's involvement in this process as the local authority and lead curator. To avoid confusion, it is important to be clear that the role of HMAG is advisory and pertains to works within the WHS only. This is also the case for the Scientific Committee. Wiltshire Council has a statutory role in approving archaeological works for the entire Scheme for the local planning authority as does Historic England in relation to designated heritage assets for DCMS. Therefore, the National Trust and English Heritage Trust will not be able to approve or sign-off archaeological works. This needs to be adequately reflected in the flowcharts in Appendix A where the advisory roles and statutory roles need to be	Highways England acknowledges the statutory roles of the Council and of Historic England. The advisory role of HMAG is also acknowledged. The comments regarding progress reporting and sign-off procedures are noted. Some of these aspects are reflected in an updated version of the draft DAMS submitted at Deadline 4, and other aspects were discussed at a meeting with the Council and other members of HMAG on 19 June 2019.

	separated out. These flowcharts need further clarity as well to indicate that Highways England is not giving itself final approval / sign-off of archaeological specifications and fieldwork. The sign-off procedure (section 7.5) must include a site inspection and written confirmation from the Council's Archaeology Service. Progress reporting (7.3) will need to include items on site conditions and any delays caused by weather plus plans and photographs and any agreed changes to programme or policy and approach.	
6.5	**Comments on Book of Reference**	
	Matter Raised	**Highways England's Response**
6.5.1	Wiltshire Council is listed as a Category 1 Owner in respect of subsoil for the following plots:	Where roads are unregistered adjacent landowners are noted in the Book of Reference as having ownership of the subsoil within the plots comprising the unregistered road, pursuant to the *ad medium filum* presumption. This approach has been applied throughout the Book of Reference for all unregistered roads.
6.5.2	05-22 This area is unregistered and so there is no evidence available to the Council to confirm the position as to subsoil.	Wiltshire Council has been recorded as having a subsoil interest in this plot because it is the freeholder of the adjacent plot 05-24 (title number WT414999).
6.5.3	05-25 This area is unregistered and so there is no evidence available to the Council to confirm the position as to subsoil.	Wiltshire Council has been recorded as having a subsoil interest in this plot because it is the registered freeholder of the adjacent plot 05-24 (title number WT414999).
6.5.4	09-06 This area is unregistered and so there is no evidence available to the Council to confirm the position as to subsoil.	Wiltshire Council has been recorded as having a subsoil interest in this plot because it is the registered freeholder of the adjacent plot 09-09 (title number WT416362).
6.5.5	09-10 This area is unregistered and so there is no evidence available to the Council to confirm the position as to subsoil.	Wiltshire Council has been recorded as having a subsoil interest in this plot because it is the registered freeholder of the adjacent plot 09-09 (title number WT416362).

6.5.6	09-15 This area is unregistered and so there is no evidence available to the Council to confirm the position as to subsoil.	Wiltshire Council has been recorded as having a subsoil interest in this plot because it is the registered freeholder of the adjacent plot 09-16 (title number WT290923).
6.5.7	09-17 This area appears to be registered under title number WT290923; if this is correct (it is difficult to tell from the Book of Reference plan for certain), this area of land does belong to Wiltshire Council. The reference to subsoil however should be removed.	This plot falls outside of the boundary for title Number WT290923 and is unregistered land. Wiltshire Council's subsoil interest comes from plot 09-16, which is registered under WT290923 and is adjacent to plot 09-17.
6.5.8	14-09 It is not completely clear from the Book of Reference plan but 14-09 appears to include part-registered, part-unregistered land. The part-registered is under title number WT290898 which does belong to Wiltshire Council and so reference to subsoil in respect of this part of the plot should be removed. The Council is unable to confirm the position as to subsoil in respect of the remaining unregistered land, due to it being unregistered.	Plot 14-09 falls outside the boundary of registered land to the north and south of the plot and comprises unregistered land only. Wiltshire Council has been recorded as having a subsoil interest in this plot because it is the registered freeholder of the adjacent land parcel 6325 (title number WT290898), which lies to the north of plot 14-09.
6.5.9	**Please Note:** Wiltshire Council is listed as a Category 1 Owner in respect of apparatus for plots **03-30** and **04-09** (both areas appear to be unregistered and so there is no evidence available to the Council to confirm the position as to apparatus). These may need to be amended to show Wiltshire Council as a Category 2 Owner to ensure consistency with the rest of the document, which shows apparatus ownership as falling with Category 2.	Wiltshire Council is listed as an occupier (falling within Category 1) in respect of these plots, rather than as the beneficiary of rights (Category 2), due to the bus stop that is located within these plots. The wording of the plot descriptions relating to this interest will be updated in the book of reference to clarify this – i.e. by adding wording to confirm that the Council's interest is "*in respect of bus stop*".
6.5.10	Wiltshire Council is listed as a Category 2 Owner in respect of apparatus for the following plots:	Details of apparatus was provided by Wiltshire Council in May and June 2018. Information on Wiltshire's street lighting was provided by Stuart Brown on the 9th May 2018. Shape files providing the locations of Wiltshire Council's drainage assets, including gully assets and culverts, were provided by Jack Francis on the 8th June 2018.

6.5.11	03-11 This area appears to be unregistered and so there is no evidence available to the Council to confirm the position as to apparatus.	Apparatus interest existed in this plot incorrectly. This interest should not have been included in this plot in the submitted book of reference. This will be updated in future versions of the book of reference.
6.5.12	04-07 This area appears to be unregistered and so there is no evidence available to the Council to confirm the position as to apparatus.	Wiltshire Council's apparatus interest in this plot relates to street lighting, taken from the information provided by Wiltshire Council on the 9th May 2018.
6.5.13	04-10 This area appears to be unregistered and so there is no evidence available to the Council to confirm the position as to apparatus.	Wiltshire Council's apparatus interest in this plot relates to street lighting, based on the information provided by Wiltshire Council on the 9th May 2018, and to drainage culverts, based on the information provided by Wiltshire Council on the 8th June 2018.
6.5.14	04-11 Registered under title number WT279708 but not showing on Wiltshire Council's GIS mapping and no deeds / files relating to this title number on the Council's database – there is therefore no evidence that Wiltshire Council owns apparatus on this site.	Wiltshire Council's apparatus interest in this plot relates to street lighting, based on the information provided by Wiltshire Council on the 9th May 2018.
6.5.15	05-21 Registered under title number WT274461 but now showing on Wiltshire Council's GIS mapping and no deeds / files relating to this title number on the Council's database – there is therefore no evidence that Wiltshire Council owns apparatus on this site.	Wiltshire Council's apparatus interest in this plot relates to drainage gully assets, based on the information provided by Wiltshire Council on the 8th June 2018.
6.5.16	05-26 This area appears to be unregistered and so there is no evidence available to the Council to confirm the position as to apparatus.	Wiltshire Council's apparatus interest in this plot relates to drainage gully assets, based on the information provided by Wiltshire Council on the 8th June 2018.
6.5.17	09-06 This area appears to be unregistered and so there is no evidence available to the Council to confirm the position as to apparatus.	Wiltshire Council's apparatus interest in this plot relates to street lighting, based on the information provided by Wiltshire Council on the 9th May 2018.

6.5.18	09-08 Registered under title number WT277549 but not showing on Wiltshire Council's GIS mapping and no deeds / files relating to this title number on the Council's database – there is therefore no evidence that Wiltshire Council owns apparatus on this site.	Wiltshire Council's apparatus interest in this plot relates to street lighting, based on the information provided by Wiltshire Council on the 9th May 2018.
6.5.19	09-15 This area appears to be unregistered and so there is no evidence available to the Council to confirm the position as to apparatus.	Wiltshire Council's apparatus interest in this plot relates to street lighting, based on the information provided by Wiltshire Council on the 9th May 2018.
6.5.20	09-18 Registered under title number WT277549 but not showing on Wiltshire Council's GIS mapping and no deeds / files relating to this title number on the Council's database – there is therefore no evidence Wiltshire Council owns apparatus on this site.	Wiltshire Council's apparatus interest in this plot relates to street lighting, based on the information provided by Wiltshire Council on the 9th May 2018.
6.5.21	09-29 Registered under title number WT47032 but not showing on Wiltshire Council's GIS mapping and no deeds / files relating to this title number on the Council's database – there is no evidence Wiltshire Council owns apparatus on this site.	Wiltshire Council's apparatus interest in this plot relates to drainage culverts, based on the information provided by Wiltshire Council on the 8th June 2018.
6.5.22	11-02 This area appears to be unregistered and so there is no evidence available to the Council to confirm the position as to apparatus.	Wiltshire Council's apparatus interest in this plot relates to drainage gully assets, based on the information provided by Wiltshire Council on the 8th June 2018.
6.5.23	14-04 This area appears to be unregistered and so there is no evidence available to the Council to confirm the position as to apparatus.	Wiltshire Council's apparatus interest in this plot relates to drainage gully assets, based on the information provided by Wiltshire Council on the 8th June 2018.
6.5.24	14-06 Registered under title number WT87750 but not showing on Wiltshire Council's GIS mapping and no deeds / files relating to this title number on the Council's database – there is therefore no evidence	Wiltshire Council's apparatus interest in this plot relates to street lighting, based on the information provided by Wiltshire Council on the 9th May 2018.

	Wiltshire Council owns apparatus on this site.	
6.5.25	14-07 As 14-06 above.	Wiltshire Council's apparatus interest in this plot relates to street lighting, based on the information provided by Wiltshire Council on the 9th May 2018.

7 Historic England (REP3-054)

7.1	**Comments on** Draft Detailed Archaeological Mitigation Strategy (DAMS)	
	Matter Raised	**Highways England's Response**
7.1.1	Development of a Research Framework for the Scheme: The results of archaeological fieldwork conducted under the proposed Scheme which transects the WHS landscape will be significant and have the potential to change and further our understanding of that landscape and the sites and monuments within it. Whilst the Scheme is primarily a proposal for road infrastructure and not a detailed research proposal, since it traverses an internationally recognised and highly significant historic environment, a landscape without parallel, and given that one of the four stated objectives of the Department for Transport concerns "cultural heritage", we have advised that the development of a research framework for the Scheme is appropriate. Such an approach should provide the appropriate means by which to identify the extent, type and method of investigation that will be most successful, in this case, in revealing the significance of the WHS and other designated heritage assets, and in most appropriately mitigating any loss of significance. The next step should be the consideration of the WHS site and Scheme specific research questions that have and continue to arise from the evaluation work conducted to date, and identifying how these questions relate to, expand upon and enhance those set in the published Research Framework.	Highways England continues to engage with Historic England and other HMAG members to agree mitigation requirements that are reasonable and proportionate to the significance of the heritage assets likely to be encountered, based on the results of the comprehensive archaeological evaluation programme that has been completed. Highways England acknowledges the need for an archaeological research framework to maximise the research benefit of the archaeological mitigation programme and contribute to a lasting legacy from the Scheme. Section 2.4 of the draft DAMS [REP2-038] considers the results of the evaluation in light of the research themes and questions identified in the Stonehenge and Avebury Archaeological Research Framework (SAARF) as a starting point for the identification of Scheme specific research questions, to be developed in consultation with HMAG members and with input from the Scientific Committee.
7.1.2	The DAMS must set out an approach to fully integrate the fieldwork and post-excavation elements into the fieldwork phase to support an iterative and flexible strategy which is critical to achieving best practice.	Section 6.4 of the draft DAMS [REP2-038] addresses this requirement. The provision has been further elaborated as necessary in an updated draft of the DAMS submitted at Deadline 4.

7.1.3	Specialists should be integrated into the archaeological contractor's project team to actively input to the design of strategies for the SSWSIs and advise through fieldwork and post-excavation. The DAMS must establish and reinforce regular communication between specialist members of the team and the fieldwork Project Manager and field staff;	Paragraph 5.1.12 of the draft DAMS [REP2-038] identifies the specialist roles that will be required as part of the Archaeological Project Team (APT). The requirement for interaction of these specialists with the Archaeological Contractor's on and off-site teams, is identified where relevant throughout section 5 of the draft DAMS. The provision has been further elaborated as necessary in an updated draft of the DAMS submitted at Deadline 4.
7.1.4	Further discussion is needed regarding how the DAMS will establish communication procedures outside the project team in particular with statutory consultees in order to access relevant specialist advice where needed in the implementation of SSWSIs, and critically, in relation to gaining necessary approvals.	The need for effective communication with statutory consultees in developing and gaining approval of SSWSIs and in the implementation of the archaeological works is acknowledged. The requirement for consultation with statutory consultees in respect of specialist advice is identified where relevant throughout section 5 of the draft DAMS. The proposed communication strategy for the archaeological mitigation programme set out at Section 7.2 of the draft DAMS [REP2-038] has been revised accordingly in an updated draft of the DAMS submitted at Deadline 4.
7.1.5	Archaeological investigation and reporting (both invasive and non-invasive) will continue throughout the Examination, the DAMS will also continue to evolve as issues arise and potential for valuable information is identified in the reports of that work.	The evolving nature of the DAMS is acknowledged. Highways England continues to engage with Historic England to ensure that development of the DAMS throughout the Examination period responds where relevant to emerging results of ongoing limited archaeological investigation and reporting.
7.1.6	Ultimately, the DCO must secure the application of the archaeological investigative methodologies set out in the DAMS to clear and agreed parameters for the development and implementation of the SSWSIs. The DAMS must provide a robust and enforceable baseline for all archaeological work under the Scheme to ensure that the high standards set for such work in an internationally important landscape are adhered to.	Highways England acknowledges the need for clear and agreed parameters for the development of the SSWSIs and a robust and enforceable baseline against which implementation can be monitored and continues to engage with Historic England and other HMAG members to develop the DAMS accordingly.
7.1.7	It is critical that the dDAMS sets out a clear procedure by which the relevant heritage statutory consultees will ultimately be required to provide approval in relation to any archaeological work conducted as part of the Scheme. It is essential that the process and parameters for decision making under the DAMS are set out unambiguously to ensure that the mitigation strategies implemented meet the requirements of the	Highways England acknowledges the need for a clear procedure for decision making under the DAMS in relation to any archaeological work conducted as part of the Scheme. Highways England continues to engage with Historic England to develop the DAMS accordingly.

	relevant national policy and guidance as well as the international obligations associated with the inscription of the WHS. This process should therefore secure the same level of safeguarding for designated heritage assets under the Scheme as would be afforded them under otherwise applicable statutory consents deriving under otherwise relevant statutory regimes, having regard to the disapplication of the relevant cultural heritage legislation under the Planning Act 2008.	

8 Barry Garwood (REP3-070 to 074)

8.1	Comments on Site Inspection	
	Matter Raised	**Highways England's Response**
8.1.1	**Point D. Cherry Lodge** This gave us a view of productive farmland and nature reserve that would be largely obliterated by the dumping of tunnel excavation material, creating raised embankments for the proposed Winterbourne Stoke bypass, with the remaining material to be dumped on the surrounding land, creating a barren Chalk landscape that would take may years to even begin to recover any value to wildlife and nature.	See response on page 7-2 of the Relevant Representations Report [AS-026] and response to item Ec.1.7 in the Examining Authority's Written Questions [REP2-027].
8.1.2	**Point E. Foredown House** Concern was expressed by the landowners about the new road bisecting the farm and taking land from it.	See responses to items 43.1.10, 43.2.1, 43.3.1, 43.7.1 and 43.7.11 in the Comments on Written Representations [REP3-013].
8.1.3	**Point I. Winterbourne Stoke Barrow Group** 1. The Western Tunnel Portal and approach will seriously impede on the setting of this unique asset, detracting from the Outstanding Universal Value (OUV) of the World Heritage Site (WHS). 2. The constructional compound to the west would be likely to destroy the archaeology rich area and the adjoining slurry treatment plant for tunnel excavation material would surely destroy any archaeological evidence.	1. For clarity, we note that the Winterbourne Stoke Barrow Group is adjacent to the existing Longbarrow roundabout. See response to items 44.2.3 and 44.3.1 in the Comments on Written Representations [REP3-013], pages 11-19 to 11-20, and 15-10 of the Relevant Representations Report [AS-026] and the Applicant's written summary of oral submissions made at ISH2 in relation to cultural heritage on 5 and 6 June 2019 (submitted at Deadline 4). With reference to AG12 Winterbourne Stoke Crossroads Barrows, Highways England disagrees with Barry Garwood that the Western Tunnel Portal and approach will seriously impede on the setting of this unique asset, detracting from the Outstanding Universal Value (OUV) of the World Heritage Site (WHS). The Scheme will remove both the A303 and the A360, including the existing Longbarrow Roundabout, from immediately adjacent to the asset group; and the A303 will

		move 150m to the south and be built in cutting to remove the sight and sound of traffic from the group. The Scheme has been sensitively designed with the use of a 2 mile long tunnel, retained deep road cuttings, essential chalk grassland mitigation to enable landscape integration, a 150m long Green Bridge No. 4 to enable visual and physical landscape connectivity and public access, canopies and hidden tunnel portals within the WHS landscape. The benefits of this are demonstrated by the photomontages and CGIs presented in the ES Chapter 6, Appendix 6.9 [APP-218] (Figure 4, Figure 5 and Figure 7). 2. See response to item 44.2.6 in the Comments on Written Representations [REP3-013]. With reference to the main compound, see paragraphs 4.2.16 and 4.2.17 of the draft DAMS submitted at Deadline 4. '*In these locations below-ground disturbance will be minimised with topsoil retained in situ and protected with imported stone to allow preservation in situ. Provision is made in the Strategy for certain archaeological monuments to be excluded for fill areas fenced off and protected in situ (see Table 10.3 and Appendix D). Installation of utility connections will require targeted archaeological monitoring and recording (AMR) and/ or archaeological excavation and recording (AER) where topsoil is required to be stripped.* *In accordance with item MW-CH5 of the OEMP [APP-187], the MW contractor will prepare a Method Statement as described in 4.1 above, setting out how it intends to preserve in situ sensitive archaeological remains and prevent deformation of topsoil/ subsoil horizons (including no-dig solutions), and how the measures would be reversed following the end of construction (i.e., removal of compounds).*' Regarding the slurry treatment plant area, see Site 42, Appendix D, of the draft DAMS submitted at Deadline 4. This area will be archaeologically investigated and archaeologically recorded prior to construction.

8.1.4	**Point L. Countess Farm** Concern was expressed about any changes to groundwater level, which is very close to the surface here.	See responses to item 44.5.1 in the Comments on Written Representations [REP3-013].
8.1.5	**Point N. Amesbury Abbey** We walked up onto the ramparts of Vespasian's Camp. The best preserved section of the earthworks, said to date from 2500 years ago, will look down on and be overlooked by the Eastern Tunnel Portal, to the point that headlights will be shining virtually straight at it as vehicles emerge from the tunnel. This would be especially noticeable in winter, with little leaf cover on the surrounding trees.	See response to item 12.3.108 in the Comments on Written Representations [REP3-013].

8.2 Comments on Relevant Representations Report

	Matter Raised	Highways England's Response
8.2.1	While building Winterbourne Stoke bypass alone would not fulfil the Government objective, the policy itself is questionable in the light of the Climate Emergency.	Highways England notes that a climate emergency was declared by the UK Parliament in the House of Commons on 01 May 2019, and that the UK Government has this month committed to introducing legislation that would require the UK to achieve net zero carbon emissions by 2050. A similar declaration was also made by Wiltshire Council in February 2019. As these specific statements followed the preparation and submission of the Scheme proposal in October 2018, Highways England welcomes the opportunity to comment on these specific climate change statements now. Whilst "climate emergency" is not itself defined in the declarations, a common theme of the declarations is to seek to reduce UK carbon emissions. Whilst the declarations do not of themselves create binding obligations, the UK is committed to achieving existing national and international commitments to reducing carbon emissions. In order to ensure compliance with these targets, Highways England has thoroughly and robustly assessed the Scheme's effect on climate change.

		For instance, this assessment established that even during the period when carbon emissions from the project will be at their highest level, the project will only contribute to 0.023% of the UK's carbon budget for the relevant carbon budget period (the 4th carbon budget period). During Scheme operation, the Scheme's carbon emissions will equate to an extremely marginal 0.008% of the UK's carbon budget for the 5th carbon budget period (please see response to item CC.1.6 in the Examining Authority's Written Questions [REP2-028]). Highways England 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. Highways England considers climate change to be a very important issue, and as such has conducted a thorough assessment of the impact of the Scheme on climate change. The recent declarations made by the UK Parliament and Wiltshire Council do not give cause to alter the conclusions of the ES assessment and the Scheme will make an extremely limited contribution to the UK's carbon targets. Please also see response to item 44.4.1 in the Comments on Written Representations [REP3-013].
8.2.2	The proposed scheme would be highly destructive of the Stonehenge landscape, including archaeology and monument rich areas outside the WHS. As such, any attempt to bypass Stonehenge should be outside the WHS and avoid further damage to any monuments.	See response to item 3.4.2 in Written Summaries of Oral Submissions [REP3-012].
8.2.3	In terms of cost, I am sure that the route to the north that I have suggested would be much cheaper than the tunnel proposal. It would also be less destructive of the Winterbourne Stoke area, as it could follow the landform closely, without need for very large embankments to dispose of the tunnel excavation material, which would also turn a large area of nature reserve and productive farmland into a barren Chalk wasteland.	See response to item 3.4.2 in Written Summaries of Oral Submissions [REP3-012] and response to item 44.1.1 in the Comments on written Representations [REP3-013].

8.2.4	The southern route would have considerable benefits for the road system in the wider area, as it could link to the A30 and form part of a Salisbury northern bypass, taking further pressure off the A303.	See response to item 3.4.2 in Written Summaries of Oral Submissions [REP3-012] and responses to items 44.1.8 and 44.1.9 in the Comments on Written Representations [REP3-013].
8.2.5	The proposed constructional compound and slurry treatment plant will bring further destruction to the archaeology rich landscape close to Longbarrow Cross Roads roundabout.	See response to item 8.1.3 above for impacts on the area close to the Longbarrow roundabout.
8.2.6	I am also hugely concerned about the possible changes to the hydrogeology of the Chalk aquifer.	See response to item 44.2.1 in the Comments on Written Representations [REP3-013] and the response to Written Question Fg.1.11 [REP2-031].
8.2.7	I am also hugely concerned about the visual impact of tunnel portals and approach roads within the WHS.	See response to item 3.4.2 in Written Summaries of Oral Submissions [REP3-012].
8.2.8	I am also hugely concerned about the potential for loss, or damage to unique heritage assets, particularly at Blick Mead.	See response to item 3.4.3 in Written Summaries of Oral Submissions [REP3-012], response to item 44.2.1 in the Comments on Written Representations [REP3-013] and page 11-2 of the Relevant Representations Report [AS-026] .
8.3	**Oral Submission**	
8.3.1	Highways England have responded to Barry Garwood's oral submission in REP3-012, section 3.4.	

9 Hosier Family (REP3-055 to 060, and 077)

9.1	Comments on Site Inspection	
	Matter Raised	**Highways England's Response**
9.1.1	**Point H (Western Tunnel Portal) –** - The view point was not on the site of the western portal, but from the field across the opposite carriageway of the western portal; - The tape used to demark the area was barely visible to the eye; - The viewpoint from the National Trust open access land looking south towards the tunnel portal was obscured by the built up section of the A303. In reality the public viewpoint into the western portal will be from the existing A303 which is at a much higher level than from the level seen on the day - It would have been more beneficial for Point H to be on M&R Hosier land and/or from the existing A303 which is the most realistic public viewpoint during the operation of the scheme Who is responsible for taking down the marker tape otherwise it will get caught up in farm machinery	The viewpoint was from a publicly accessible and safe location, which had been agreed in advance of the ASI via the itinerary. The viewpoint enabled the western portal location to be seen in the context of the landscape. The tape used to demarcate the area was visible and those on the inspection were able to see it. An elevated location within the National Trust open access land was chosen to view the western portal location. The fact that the western portal location is not visible from all parts of the National Trust land is considered beneficial and demonstrates the careful siting of the portal. The site inspection participants were not able to stand on the existing A303 due to health and safety concerns. All locations were agreed in advance with the Examining Authority to provide safe viewing locations. If the tape is still up, Highways England can remove it when they undertake photomontages from M&R Hosier land in the coming weeks, for which permission has been sought and approved by M&R Hosier.
9.1.2	**Point I (Green Bridge 4) –** - Very difficult to spot the tape on the ground which denoted either end of the Green Bridge 4 if not impossible	The Examining Authority were able to view the tape from the elevated position of the bus, which was parked in the layby adjacent to the Green Bridge No. 4 location. Photomontages are being produced for the Examining Authority to indicate the view from Green Bridge No. 4 towards the western and eastern portals.

	Again would have been more beneficial/appropriate to view Green Bridge 4 from the A303 and/or M&R Hosier land as this will be where the public will see the structure from	
9.1.3	Generally we consider that a new ASI is arranged to inspect the western portal and the green bridge from the actual positions where the public will be viewing them from if the scheme proceeds.	There will be a second ASI in August and Highways England would advise that M&R Hosier submit this request to the Examining Authority. In relation to the above matter regarding Point H and the Western Tunnel Portal, this will require permission and access to locate tape to demarcate the portals, if it is removed prior to August.
9.2	**Response to Written Questions (CA.1.48 - Rachel Hosier on behalf of Max Hosier 20020782 and Helen Hosier – Ref:20020636)**	
	Matter Raised	**Highways England's Response**
9.2.1	The seeming injustice that the land that has been farmed by four generations of our family can be taken away in exchange for a compensation fee which will not enable us to purchase additional replacement acres is criminal. It seems only honourable that Highways England (HE) should compensate like for like, by providing compensation levels to enable us to replace the lost area of land in order to ensure there will be no detrimental effects to our overall farm business.	See response to item 40.1.13 in the Comments on Written Representations [REP3-013]. Paragraph 6.3 'Fair compensation' of the Statement of Reasons [APP-023] details the Applicant's approach to compensation.
9.2.2	Farm overheads are spread over the whole acreage, so a reduction of 4% of the arable land will have a considerable effect. Added to this, our independent investigation into the groundwater of the Scheme has highlighted that there is no certainty that groundwater flow will not be effected by the tunnel. HE's refusal to take this real danger on board and investigate a replacement supply, is astounding. The borehole water	See response to items 40.5.1-40.5.9 in the Comments on Written Representations [REP3-013].

	supply is critical to our business and farm cottages. Should this be compromised, it will have devastating results on our farming business. -	
9.2.3	The management agreement for a legacy brief refers to our family ethos, summarised as follows: Although the land we farm provides us with an income, we have a moral responsibility to ensure it is tended in a respectful way, maintaining the health of the soil and welfare of the livestock. We endeavour to do whilst maintaining the natural environment and protecting the important archaeological culture depicted in the barrow cemeteries. It is this guardian role of managing the farm as a legacy for all those generations that will follow after that we refer to.	Soil - see response to item 40.1.24 in the Comments on Written Representations [REP3-013]. Archaeology – see response to item 40.2.16 in the Comments on Written Representations [REP3-013]. Animal Welfare – see response on page 13-5 of the Relevant Representations Report [AS-026].
9.3	**Response to Written Questions (Ag.1.28 - M & R Hosier, Boreland Farm – Ref: 20020373)**	
	Matter Raised	**Highways England's Response**
9.3.1	The business operates a balanced cropping rotation, with sequential rotation of different arable and livestock including spring and winter cereal crops as well as peas, winter oilseed rape, stubble turnips and pigs as cropping breaks to maintain the health and structure of the soil. Within the scheme area, the pigs have the dual role of adding extra organic matter to the soil to aid fertility as well as providing a break for cereal disease and weed burdens.	The agricultural use of the land is understood including the use of pigs in an arable cropping rotation – and the inherent benefits that this provides. As set out at paragraph 40.1.7 [8.18 Comments on Written Representations] 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. However, there would still be a requirement to acquire permanently an area of some 15ha from Boreland Farm with Westfield Farm; this represents 3% of the total holding. It is understood that the pigs make use of 89ha at the northern end of the farm on a 6-year rotation, utilising 29ha at a time. The land that would be acquired forms part of the 89ha and represents 17% of the land area used by the pigs. Due to the reduction in land available it is inevitable that pig numbers may need to be reduced unless other land were made available on the 526ha holding. If the pig

		or arable enterprises are demonstrably adversely affected by the scheme, compensation may be claimed.
9.3.2	Being the furthest end of the farm from the main farm entrance, the pigs deposit the organic matter straight onto the land without the need to bring organic matter through from the opposite end of the farm. Although byway 12 does link to the A303 it is not appropriate for the delivery of heavy lorries of organic matter as the byway surface has a number of scheduled monuments that would be at risk of damage, the area is also too deeply rutted and the byway surface will not sustain such traffic.	See response to item 40.7.3 in the Comments on Written Representations [REP3-013].
9.3.3	Although the percentage of land take of our holding is only a small percentage, it represent a 20% reduction in the block of land that the pig unit rotates around. This would have a significant impact on this viability of the enterprise. The pig unit operates at an optimal efficiency of 750 sows spread over approximately 29 ha being supported by 3 members of staff. The reduction in the size of the block of land would either require a reduction in pig numbers, or for the pig enterprise to locate to a different part of the farm every 4 years. Whilst this is possible, it will have considerable impact upon the economies of scale of the enterprise and the profitability. Even moving from field to field in close proximity is a considerable investment, but the costs would increase with a greater distance of moving. The flexibility to move the pig unit within the farm is limited by field topography, size and location of scheduled monuments, as such there are limited areas within the farm that the enterprise can use to relocate.	See response to item 40.1.1 in the Comments on Written Representations [REP3-013]. It is understood that the pigs make use of 89ha at the northern end of the farm on a 6-year rotation, utilising 29ha at a time. The land that would be acquired forms part of the 89ha and represents 17% of the land area used by the pigs. Due to the reduction in land available it is inevitable that pig numbers may need to be reduced unless other land were made available on the 526ha holding. If the pig or arable enterprises are demonstrably adversely affected by the scheme, compensation may be claimed.
9.3.4	The unit has had a high health status with the A303 providing a natural barrier between the pigs and potential biohazards in this location. Our concern is that the new proposed byway along the existing A303 and A360, along with the anticipated heavier use of the existing byway 12,	See response on page 17-9 of the Relevant Representations Report [AS-026] and response to item Ag.1.4 (part ii) in the Examining Authority's Written Questions [REP2-022].

	when combined with the scheme objective to bring more people into the area, will increase the risk of trespass onto the pig unit. Pig diseases are known to be carried on peoples clothing, so there is an increased risk of health to the pigs with the proximity of the new byway in this area. There is also the pressures from livestock worrying from dogs off leads wandering into the pig field causing stress or even injury to animals.	
9.3.5	The flexibility to move the pig unit within the farm is limited by field topography, size and location of scheduled monuments, as such there are limited areas within the farm that the enterprise can use to relocate.	See response to item 32.7.2 in the Comments on Written Representations [REP3-013]. The agricultural use of the land is understood including the use of pigs in an arable cropping rotation – and the inherent benefits that this provides. As set out at paragraph 40.1.7 [8.18 Comments on Written Representations [REP3-013] 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. However, there would still be a requirement to acquire permanently an area of some 15ha from Boreland Farm with Westfield Farm; this represents 3% of the total holding. It is understood that the pigs make use of 89ha at the northern end of the farm on a 6-year rotation, utilising 29ha at a time. The land that would be acquired forms part of the 89ha and represents 17% of the land area used by the pigs. Due to the reduction in land available it is inevitable that pig numbers may need to be reduced unless other land were made available on the 526ha holding. If the pig or arable enterprises are demonstrably adversely affected by the scheme, compensation may be claimed.
9.3.6	Added to this the risk that our borehole water supply has the potential to be compromised for water quality and quantity with no firm commitment for HE to reinstate water supplies. Animal welfare for an outdoor breeding enterprise is extremely high, with requirements legislated within the buyer's assurance contracts. The worst case scenario would be, that should 750 sows and followers be without water for any length of time,	See response to items 40.5.1-40.5.9 in the Comments on Written Representations [REP3-013].

	an emergency slaughter plan would be required to prevent breach of animal welfare.	
9.3.7	For all the following reasons, the seeming small reduction of area will have a significant impact on the viability of the pig enterprise on the farm as well as having consequences to farm profitability. • Being a mixed farm there are a lot of "unseen" benefits from enterprises, each enterprise in a symbiotic relationship with the other. The removal of pigs in the rotation will remove benefits from organic matter and plant health and weed burden.	The agricultural use of the land is understood including the use of pigs in an arable cropping rotation – and the inherent benefits that this provides. As set out at paragraph 40.1.7 [8.18 Comments on Written Representations] 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. However, there would still be a requirement to acquire permanently an area of some 15ha from Boreland Farm with Westfield Farm; this represents 3% of the total holding. It is understood that the pigs make use of 89ha at the northern end of the farm on a 6-year rotation, utilising 29ha at a time. The land that would be acquired forms part of the 89ha and represents 17% of the land area used by the pigs. Due to the reduction in land available it is inevitable that pig numbers may need to be reduced unless other land were made available on the 526ha holding. If the pig or arable enterprises are demonstrably adversely affected by the scheme, compensation may be claimed.
9.3.8	• There would also be a reduction to farm security as there is always someone from the pig enterprise within the area for the greater part of each day, which has slight benefit in reducing incidence of poaching.	See paragraph 40.1.17 in the Comments on Written Representations [REP3-013]. Fencing will be discussed with landowners pursuant to item MW-COM3 of the OEMP.
9.3.9	• There would be a loss to biodiversity within the area as beetles associated with the pig enterprise feed the Stone curlews, bats and other species within this area. The pig, beetle relationship may be drawing the bats to this area, so removing the pigs from this area of the landscape there will be less to attract bats into this exposed area.	Dung from pigs would attract invertebrates, which is a foraging resource for bats. The bat activity surveys undertaken did not show the areas where the pigs were located as having peak bat activity levels [APP-258]. Altering the position of the pig enterprise within the farm would not reduce the overall foraging resource for bats using the open farmland in this landscape.

9.4	**Comments on Written Questions**	
	Matter Raised	**Highways England's Response**
9.4.1	**Highways England Response to Examining Authorities written questions 8.10.11 Flood risk, groundwater protection, geology and land contamination (Fg1) Deadline 2 [1]** We remain concerned that Highways England have not adequately addressed the concerns raised within the examining authority's questions [on the Flood risk, groundwater protection, geology and land contamination submission for the A303 Amesbury to Berwick Down (Deadline 2)]. Our concerns being: **Question Fg 1.5 Geology and soils** **Response to point 4** We have concerns that as the tunnel boring machine will operate below groundwater level, any voids will require filling to provide an adequate seal. In order to achieve this grout will have to be sprayed at significant pressures onto the chalk surface. In doing so there is a high risk that grout will also be forced into the fissures that supply our farm borehole, potentially reducing the volume of water that is available to us. As far as we are aware, there have been no tests carried out to assess the distance that the grout will travel along the fissures when under pressure. References to Crossrail C310 Thames Tunnel project through the chalk aquifer do not take into account that the aquifer is not used for a public water supply in London. There are both public and private drinking water abstractions drawing from the area surrounding the A303 project.	See response to item 44.5.1 and 44.5.2 in the Comments on Written Representations [REP3-013].

	We note the intended use of grout and lubricating fluids that are non-contaminating to water supplies. But there is the potential for the grout lubrication mix to combine with the fine ground up phosphatic particles from the tunnel boring process and be carried along the fissures. As the grout sets in the fissures it will block the water flow.	
9.4.2	**Question Fg 1.8 Contaminated land** **Response to point 2** We note that the Planning Authority and Environment Agency will be informed should previously unidentified contaminated land (including ground water) be found during the construction, but there is no note of when our business will be informed of any risk to our water supply and health. Our farm has no mains water supply and is solely reliant on boreholes to supply drinking water at farm properties as well as livestock. As such, it is important that we are informed of any situations that have the potential to contaminate our drinking water. An alternative safe water supply would need to be provided if this was the case. In discussions with HE, we note that groundwater will only be monitored quarterly in the surrounding area. As such, it is highly likely that we will be drinking contaminated water and become unwell before HE informs us that there may be a problem. Having pointed out for over a year, that there is no monitoring of the farm drinking water supply, HE have now decided they will carry out surveys. However, the only monitoring offered is for water levels and chemical composition. There is no intention to carry out any water quality analysis to drinking water standards although we have raised their moral obligation to do so. In addition HE have made no provision for any alternative source of safe drinking water for our farm or farm business. There seems to be no comprehension of the difficulties in providing us with an alternative water supply if this is needed.	See response to item 40.5.1- 40.5.9 in the Comments on Written Representations [REP3-013]. The main works contractor shall develop a Scheme-wide Groundwater Management Plan, outlining how groundwater resources are to be protected in a consistent and integrated manner. The Plan shall be prepared in consultation with the Environment Agency and address: a. Potential effects on groundwater (resources and quality) that fall outside other regulations such as the Environmental Permitting Regulations. b. An update to the Groundwater Risk Assessment for the final design and construction plan. c. The groundwater level and water quality monitoring and reporting programme. Development of baseline groundwater conditions and derivation of trigger levels and action levels/mitigation/action plans for exceedances and accidents/incidents.

9.4.3	**Question Fg 1.8 Contaminated land** **Response to point 4** As it cannot be proved that there will be no impact on our water supply, HE has a responsibility to ensure that measures are in place should our water be compromised. We require a legal document from HE stating details of measures they guarantee to put into place to reinstate safe drinking water at Boreland and Westfield Farms. This would include temporary measures for immediate drinking water as well as provision of a long-term safe water supply. Our water engineers would need to advise on appropriate water provision as they have the necessary knowledge and experience of our farm supply that HE do not.	See response to item 40.5.7 – 40.5.9 in the Comments on Written Representations [REP3-013].
9.4.4	**Question Fg 1.9 Land and groundwater contamination** **Response to point 1** Meeting with the HE groundwater modelling team, we learned that even with the groundwater model assessing the impacts, there can be no certainty that groundwater levels will not be affected. In view of the fact that there are a number of farms an cottages that drink borehole water, it is surprising that HE have not carried out tracer tests within the proposed locations of the tunnel, to ascertain which boreholes are linked to the fissures located in the line of the tunnel. This information would give more confidence as to the accuracy of the water model used to assess the scheme's effects on groundwater. We note that OEMP [APP-187] sets a requirement for the contractor to ensure that work operations do not affect the chalk aquifer. Throughout the documents there are references to contractors being responsible for various operations and not HE as the Applicant of the Scheme. As such, we believe that the contractors chosen must be assessed for adequate public liability insurance should there be a breach in the contractors' obligations. We would require a written clarification as to who is responsible for reinstating a safe like for like supply of water to our farm.	As part of the procurement process the Applicant will ensure that the contractor(s) has adequate public liability insurance relevant to undertaking a scheme of this nature. Item MW-WAT11 of the OEMP (management of impact on abstraction boreholes) [REP3-006] outlines measures to be developed by the appointed contractor(s) to manage any potential risk of groundwater pollution at abstraction points. This includes monitoring of water quality where agreed through consultation with abstractors / licences holders and the Environment Agency. Items MW-WAT11 and MW-COM6 of the OEMP identify that it is the main works contractor's responsibility to ensure that alternative water supplies are provided to private water abstractors in the event they are adversely affected by construction works. Measures within the OEMP are secured via Schedule 2 paragraph 4 of the draft development consent order [REP3-002].

9.4.5	**Question Fg 1.10 Combined effects** **Response to point i) 8** Although dewatering or abstraction is not intended during the construction process, it has been stated that it may be necessary in some scenarios, in locations such as Stonehenge Bottom. This area is one of high faulting and fracturing through which most of the fissures supplying the region pass. So although the water model shows that dewatering "should not" significantly reduce aquifer levels, there is no certainty that the small reduction in water levels will not impact on our borehole supply. Water levels may be reduced to levels below the level where the fissures enters our borehole. As no surveys have been done on our boreholes to establish where the water enters there can be no certainty that this will not severely reducing water yields available to us. See M & R Hosier Written Representation, Appendix 2 Groundwater Concerns – Report by Sweetwater Resources 2] See page 5 paragraph 12	See response to item 40.5.8 in the Comments on Written Representations [REP3-013]. Any need for dewatering will be minimised as far as reasonably practicable. The current proposal is to use tunnel construction techniques (such as the use of Tunnel Boring Machines) that limit the requirement for dewatering during construction. The assessment of risk and identification of any required mitigation measures will be achieved through the OEMP (MW-WAT8) and whichever regulatory regime is ultimately agreed, i.e. either the Environment Agency's permitting regime or protective provisions within the development consent order, if it is confirmed that dewatering will be required.
9.4.6	**Response to point ii) 9** We have concerns over the accuracy of the Conceptual site models used to assess the water movement within the geology of the Scheme landscape. See M & R Hosier Written Representation, Appendix 2 Groundwater Concerns – Report by Sweetwater Resources 2] Pages 2 to 6, Paragraphs 6.1 to 6.13 Paragraph 6.12 The model does not predict water levels to an accuracy which guarantees that there will not be a reduction of yield from boreholes during periods of low groundwater in summer, or that there will be no contamination. Therefore, HE is wrong to say there is zero risk to the water supply of Boreland and Westfield Farm. Mortimore et al Proc. Geol Assoc 2017 Figure 26 notes presence of many high permeability sub-horizontal fissures (dipping to the south) in the location of Stonehenge Bottom. As the tunnel is below the water	The conceptual model has built on the work of previous investigation phases from other consultants, as well as new ground investigation data, and the understanding of the catchment interactions of groundwater with surface water across several catchments that influence groundwater flow through the Stonehenge area developed in the Wessex Basin Study. The model was considered to be a good representation of groundwater levels and river flows by its technical working group as well as Wessex Water, the largest groundwater abstractor in the area. The model incorporates aquifer property information from pumping tests accounting for fracture flow through which groundwater in the aquifer flows. Higher transmissivities were recorded in pumping tests in Stonehenge Bottom as expected for a dry valley environment, which has been incorporated into the model. The fractures observed are typical of Chalk whose flow characteristics are understood from pumping test analysis.

	table in this location and the exact location of the fissures will never be known unless the whole of the area is surveyed by core samples every few meters, it is not possible to assess the full damming effects that a tunnel will cause. Claims that the water will flow round cannot be accurately known until the tunnel is in place. There is a massive potential for the tunnel to alter groundwater flows far beyond the survey area.	Groundwater level trends from monitoring data between the tunnel and Hosier abstractions shows the model properties are appropriate for the trends observed, capturing the bulk of groundwater flow behaviour. The Groundwater Risk Assessment considers relative differences between the baseline and tunnel scenarios in line with best practice, acknowledging that absolute groundwater levels cannot be simulated perfectly in a heterogeneous medium. The calibration shows that the overall properties of the aquifer have been captured well. The model has also been set up with a conservative representation of the tunnel which gives confidence to the impact assessment.
9.4.7	**Question Fg 1.41** **Response to point 2** HE inform us that there will be no impact on our groundwater supply as the Environment Agency (EA) are overseeing the project ensuring all areas of concern will be appropriately resolved prior to the Scheme going ahead. We disagree with this statement as EA will be assessing the Scheme in relation to the impacts on the River Avon and public water supplies. There is no legal obligation for EA to assess the impact on private abstraction licences. Indeed we believe that there has not been the necessary work carried out by HE on private abstraction boreholes for them to fully assess this criteria. 2] REP2-104: M & R Hosier WR: Groundwater Concerns – Sweetwater Resources Appendix 2: https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010025/TR010025-000808-M&R%20Hosier-Written%20Representation.pdf	See response to item 40.5.1 – 40.5.9 in the Comments on Written Representations [REP3-013]. The EA is responsible for the protection of controlled waters including groundwaters and all licensed abstractors. The EA provided Highways England with all licensed abstractions in their records and not just public water supplies. The EA require impacts on groundwater receptors to be assessed before construction commences or dewatering (if needed) is permitted, as secured through the OEMP (MW-WAT8) and the EA's regulatory powers.

9.5	Additional Submissions (A303 Amesbury to Berwick Down: Summary of Appendix 1 Written Representation - By Tracé Williams, FarmView Consutancy – Representing M & R Hosier, Westfield & Boreland Farms – Ref: 20020373)	
	Matter Raised	**Highways England's Response**
9.5.1	The Appropriate Assessment does not mention any potential impacts of continual lights, noise and construction traffic upon the gathering activity of birds forming the autumn roost. Autumn roosts play an unknown role in survival of young as they gather with adults before migration, also they are vital in enabling assessment of annual breeding success of the SPA population. The Appropriate Assessment does not mention any potential impacts of continual lights, noise and construction traffic upon chick rearing. Construction may render large areas that are currently used at night-time by adults foraging for their chicks, as unsuitable. Stone Curlew may forage up to 3km from the nest to find food and this activity mostly being undertaken at night. It is vital that comprehensive investigation be undertaken of effects that construction works may have on the birds' ecology.	A large roost of stone curlews was recorded congregating on the RSPB Normanton Down nature reserve in autumn 2017, located over 500m south-east of the western portal. Measures to avoid disturbance of sensitive ecological receptors outside the limits of the scheme are considered suitable and proportionate to avoid disturbing the autumn roost of stone curlews. PW-G4 and MW-G12 of the OEMP [REP3-006] set out the core working hours. Works that will occur outside of the core working hours include the use of the tunnel boring machine, which will be out of sight underground. Some lighting would be required at the western portal during construction of the tunnel, but the works would be in a deep cutting which would form a visual barrier, limiting light spillage as detailed within 8.9.35 of the Environmental Statement [APP-046]. MW-G29 of the OEMP requires the CEMP to include measures to minimise light spillage, particularly around the portals. As noted, stone curlews forage at night within the pig enterprise and the construction works would not prevent this foraging activity. It is to be noted that existing lighting from A303 traffic and Longbarrow roundabout would remain until the traffic was routed into the new tunnel. MW-NOI1 of the OEMP requires the use of best practicable means for minimising noise. In addition, PW-BIO5 of the OEMP includes specific mitigation measures in relation to stone curlew. The Statement to Inform Appropriate Assessment [APP-266] is considered robust in terms of its assessment of construction impacts on the stone curlew population in the vicinity of the Scheme.
9.5.2	There appears to have been a lack of consistency when assessing Stone Curlew breeding plots at Winterbourne Stoke and Normanton Down reserve. Whilst Normanton Down is not directly in the construction path, it is bounded by two byways being within 180m of a breeding plot	See response to item 40.3.7 and 40.3.9 in the Comments on Written Representations [REP3-013]. The Scheme would not change Byways 11 and 12. Visitor usage of the PRoWs adjacent to Normanton Down has been surveyed and this is ongoing. The results

	at the closest point. We are concerned at the lack of baseline data collection on current byway use. Promotional documents produced by Highways England actively encourage visitors to “roam and explore” the southern half of the WHS without restriction, yet there are no plans to monitor this to assess any impacts.	will provide a baseline for any subsequent monitoring of visitor usage of the PRoWs.
9.5.3	We are unconvinced that the proposals to deal with Stone Curlews should they be attracted to bare ground created by construction works are adequate. We can find no recognition that breeding, in its entirety, can last up to 10 weeks. If the Scheme is promoting itself for biodiversity why has the minimum distance of 450m been chosen as an exclusion zone should any nests occur on the bare ground in the construction areas? Legislation states that works should take account of and fit around the requirements of Stone Curlew. As such we feel the exclusion zone should be at least 500m.	The OEMP was amended at Deadline 3 (items PW-BIO5 and MW-BIO8), with the relevant buffer zones in question being extended to a maximum of 500m on a precautionary basis [REP3-006].
9.5.4	The Great Bustard is noted of National Importance /High Value. It is also listed under Annex 1 therefore given additional protection under European law being a species for which an SPA can be designated. The UK population of Great Bustard is currently only found within the Salisbury Plain area, being the location of the Great Bustard Recovery Project. The Scheme is billed at delivering biodiversity benefits and yet it seems to continually overlook the Great Bustard despite it being a very high-profile species nationally and one that visitors to the area are keen to spot. Great Bustard has been omitted from the summary of important biodiversity features within the study area, we can find no field study methods or dates of survey recorded. Normanton Down and the surrounding landscape south of the A303 is important to the reintroduction project. It frequently hosts visiting and occasional breeding Great Bustard. Baseline surveys are absent for this species, therefore vital information to aid assessment of likely impacts is missing.	See response to items 40.3.18 -40.3.21 in the Comments on Written Representations [REP3-013]. The reintroduced great bustard has been taken into account in the environmental assessment in the Environmental Statement Chapter 8 Biodiversity [APP-087]. Recent data on locations of great bustard were provided by the Great Bustard Group to inform the environmental assessment. Further consultation with the Great Bustard Group will be undertaken in the period leading up to and during construction.
9.5.5	We are extremely concerned at the creation and management proposals for chalk grassland within the Scheme. Creation should always use locally sourced seed where possible and establish the correct grassland	See response to item 40.3.30 in the Comments on Written Representations [REP3-013]. Due to the large area of calcareous habitat to be seeded and uncertainty about the quantity of brush-harvested seed that may be available at

	type for the locality. Salisbury Plain is the obvious candidate for brush harvested seed which has been used successfully many times in the locality before, but this method and source of seed is excluded.	the time required, it is not considered appropriate to restrict seeding of the scheme to wild-harvested seed from Salisbury Plain. Selective use of some wild-harvested seed could be included in the detailed landscaping scheme at some locations, but this would be finalised when the Scheme is developed during detailed design and submitted for approval under Requirement 8 of the draft Development Consent Order. Some species of grasses that may be present in established grassland and hence in wild-harvested seed can become dominant if seeded into new habitats and suppress less vigorous species. Commercially-produced seeds would provide scope for seeding areas with selected species characteristic of the early stages of chalk grassland, in seed mixes with and without grasses. This would provide confidence in achieving the target habitat type. The chalk grassland would establish from seed in two to five years, but would continue to develop, with additional species appearing over time according to conditions on site. As described in the OLEMP [APP-267], the objective will be to create a mosaic of early-successional habitats ranging from bare ground to species-rich, low nutrient, swards.
9.5.6	The proposed management tool for the new grasslands is mowing; this is the single most destructive method that could be deployed in terms of destruction of invertebrates. Many invertebrates would be attracted to the new grasslands, with very rare species attracted from Salisbury Plain and Normanton Down, but we fear the new grasslands would act as a sink to their detriment. We seek assurances that correct expertise in chalk grassland creation is sought and that local landowners with many years expertise such as ourselves are included.	Applying a range of management within the scheme will be beneficial to overall biodiversity. The management techniques for different areas of the scheme, including mowing and grazing, will be developed during detailed design and incorporated into the detailed landscaping scheme submitted for approval under Requirement 8 of the draft Development Control Order, as well as the Landscape and Ecology Management Plan to be developed within the framework set out in the OEMP. As detailed on page 1 of the Butterfly Conservation Written Representation [REP2-193], Butterfly Conservation is supportive of the habitat creation and management techniques that have been recommended. "*BC supports the proposals for chalk grassland creation as outlined in the submitted version of the OLEMP*." Butterfly Conservation highlights where suitable mowing and collection of arisings have been successfully implemented during the habitat creation of the A354 Weymouth Relief Road, Dorset. There will be further engagement with stakeholders on habitat creation and management during detailed design.

9.6	Additional Submissions (A303 Amesbury to Berwick Down: Summary of Appendix 2 Written Representation By Sweetwater Resources Ltd Representing M & R Hosier, Westfield and Boreland Farms – Ref: 20020373)	
	Matter Raised	**Highways England's Response**
9.6.1	1. The water supplies for two homes, the farm and livestock are provided by two boreholes A (no water treatment) and B (ultra violet only), cannot kill oocysts from Cryptosporidium). 2. Loss of water could result in loss of business and home, either due to pollution from pathogens and/or reduced yield. 3. If water was lost the options are:- a. Construct new borehole. To obtain a competent water well driller and complete the works could take at least 6 months. To tanker in 30 cubic metres per (daily licence), construct a new borehole and ancillary works would cost at least £278,000.The maximum distance for pumping from the lorry is 300m.The distance from the lorry to reservoir is 1000m and is across a valley. Storage, hardstanding, a pump and an electrical supply would have to be constructed before tankering operations started. b. To construct a new water mains could take a year. Wessex Water has been contacted but no quotation has been received. Tankering cost for a year would be approximately £416,000 and 10,000 cubic metres would be £22,000. c. In both cases, construction of a new borehole and/or mains supply would require alteration to existing water distribution system. As much of the farm is within the World Heritage Site and the water distribution system was installed prior to the scheme being created, the cost and time involved are unknown.	The Scheme is not anticipated to increase the risk of pathogenic contamination as there are no significant changes in sources of pollution or the pathway. The Groundwater Risk assessment [APP-282] predicts no impacts at the boreholes. Notwithstanding this, MW-WAT11 of the draft OEMP sets out measures for management of impact on abstraction boreholes: *"The main works contractor shall recognise the rights of existing abstractors and take measures to avoid or minimise, so far as reasonably practicable, loss of interruption of supply, or provide alternative supplies. The main works contractor will pit in place propagate monitoring and emergency measures to overcome the adverse impacts if this occurs."*

9.6.2	The farm comprises pasture supporting livestock and cereals overlying Chalk and hence the aquifer is vulnerable to pollution. At BH A, groundwater is approximately 30m below ground level. Most ground water flow is via horizontal beds/fractures from the proposed Tunnel A 303 in a south east direction towards Boreholes A and B. 5. Due to fracture flow there is risk of the following:- a. The cutting removes the protective topsoil and Chalk which enables the water table to be within at least 3m of the surface and may arise above it, therefore greatly reducing the protection afforded by attenuation. b. The presence of dead animals from road kill(deer etc., in the cutting and living within the embankment greatly increases risk from contamination via , due to rotting carcases , faeces and urine. c. The actions of the TBM and injection of grout could block fissures which supply the water to Boreholes A and B. It is possible to measure the volume and pressure of grout pumped into the Chalk but not how far it travels along fissures. As the fissures can be several millimetres in width and the bed and groundwater flow towards the south east this could be far. d. Heavy rainfall producing fast groundwater flows could wash Chalk slurry and /or grout from the TBM which could flow via fissures into the boreholes blocking them or the pumps. e. Any increase in turbidity would reduce the effectiveness of the UV and so increase the risk of disease from pathogens.	a. The water table is within 3m of the constructed portal at extreme peak groundwater levels only, which occur rarely. Typical winter high groundwater levels along the tunnel alignment are approximately 4m deeper than the extreme peak groundwater level as shown in Figure 4.1 to Annex 1 of APP-282. The dry valleys between the tunnel and Hosier boreholes are areas of shallower groundwater compared to interfluvial areas b. The Environment Agency consider a 50m buffer around small abstractions such as private supplies as sufficient for activities leading to a risk of pathogen contamination. The highest risk is from nearby farming activity rather than road cuttings in excess of 2km away. c. See response to items 17.1.1 to 17.1.4 in the Comments on Written Representations [REP3-013]. Also see responses under agenda item 5 from the written oral submission of ISH4. d. Groundwater monitoring data does not indicate rapid recharge and fast groundwater flow in the area. Monitoring data shows rising groundwater levels from the autumn through to spring in response to recharge, and declining levels from the spring to autumn, in common with typical Chalk aquifer behaviour. e. See response to item 40.5.1 to 40.5.9 concerning groundwater supply impacts in the Comments on Written Representations [REP3-013]. Highways England agrees that increased turbidity can reduce the effectiveness of UV treatment. However, the assessments completed to date do not indicate that there will be a significant impact to groundwater quality. The type of grout used in the construction of the tunnel will be determined as the design develops and will require approval by the Environment Agency. agenda item 5.2 from the oral submission for ISH4 regarding construction. Any need for dewatering will be minimised as far as reasonably practicable which would reduce further the potential for increased turbidity. See agenda item 5.2 from the oral submission for ISH4 regarding dewatering and abstraction.

9.6.3	HE have shown ignorance of the requirements of the Private Water Supplies (PWS) Act 2016 under which Boreland Farm has to supply water. HE have failed to sample and analyse water according to the PWS 2016, especially pathogens. HE did not volunteer their specifications for preventing contamination or their hygiene and disinfection procedures in relation to the ground investigation water monitoring boreholes. a. HE have not sampled and tested pathogens in the water by a DWI approved laboratory. b. Have allowed ground investigation water monitoring boreholes to be constructed and left open which could allow animals to fall in and/or defecate and their rotting carcases would produce pathogens. Absence of security guards means somebody could have maliciously contaminated the groundwater. c. Did not supply information that the drillers are free from infectious diseases; that overalls and gloves are free from pathogens and the drilling rigs were clean and free from pathogens. Drilling equipment and casing should have been steam cleaned using water containing 50mg/l chlorine to ensure removal of mud, manure and faeces. Only construction risk assessments and construction methods were supplied when asked for additional information. d. Did not ensure the sanitary seals were at least 50mm wide, 6m deep, comprising 50:50 cement water and were installed via Tremi pipes from the base. e. The Farm was not provided with any instructions of the ongoing farm management, especially muck spreading, around the area of the ground investigation water monitoring boreholes in line with good management practice of water protection.	a. The groundwater analysis is a standard suite for characterising groundwater baseline chemistry. Drinking water sampling is the responsibility of Wiltshire Council and is not duplicated in the A303 scheme monitoring programme. b. All drilling operations are conducted by a suitably qualified driller (NVQ level 2) in accordance with both BS5930 and the contractor's site-specific Risk Assessment and Method Statement (RAMS), which has been reviewed and approved by the project HSE Advisor. In addition, the Advisor visits site on a weekly basis to inspect the works and ensure that all necessary safety and environmental provisions are being adhered to. Each borehole location is set up within a secure compound area comprised of Heras fence panels which provides a physical barrier between the borehole and livestock, wildlife and the public. Within each compound area (20mx20m approximately) the ground is covered with protective trackway or matting and a layer of visqueen impermeable membrane beneath in order to contain any water and fines within the working area. At the end of each shift a plug is connected to the top of the casing which prevents foreign objects including contaminates from entering the borehole. c. The Contractor's RAMS document identifies the risk and the precautions the staff will take to prevent contamination of the aquifer. In view of the location of the boreholes and the distance from the wells steam cleaning and disinfecting of tools is not considered necessary. d. The RAMS document discussed the protection of the aquifer at depth and ensures that a bentonite plug will be installed as and when required. e. We consider that, as a private water supply owner, the Hosiers will be aware of good practice around their drinking water well and the same practices should be applied in the vicinity of any monitoring wells.

9.6.4	HE have not undertaken the following assessments of Boreholes A and B a. Tracer tests to determine absence/presence of fissures between site and BHs A and B and if present the travel time of groundwater flow (maximum and minimum velocities). b. Seasonal variations in rest water and pump water levels, pumping tests to assess yield, drawdown and efficiency, undertaken geophysical logging such as conductivity, temperature calliper, flow velocity (pumped and un-pumped) to determine elevation of major flow horizons. The first indication of pathogenic pollution of the water from Borehole A would be illness.	There is no evidence of karstic behaviour and no mechanism by which the Scheme is predicted to affect Boreholes A and B which are at distances of between 2km and 3km from the Scheme. Therefore, detailed investigation of these boreholes is not necessary. Notwithstanding this, HE has agreed to monitor boreholes where practicable and MW-WAT11 of the draft OEMP sets out measures for Management of impact on abstraction boreholes.
9.7	**Comments on Written Representations**	
	Matter Raised	**Highways England's Response**
9.7.1	H E Response to Examining Authorities written questions 8.10.7 Biodiversity, ecology and biodiversity Deadline 2We remain concerned that Highways England have not adequately addressed the concerns raised within the examining authorities' questions [on the Biodiversity, biological environment and ecology submission for the A303 Amesbury to Berwick Down (Deadline 2) [2]]. Our concerns being: Page 7-2 Question Ec.1.1 Cumulative and in-combination assessments: Response to point ii) 2 The response does not address the key points of concern within our Written Representation, Deadline 2: In-Combination Effects, Pg. 7-9: 3.21- 3.28 [2]. We remain highly concerned that the planned increase of military personnel and families, increased housing development and encouraged tourism into the area will have an unknown level of	The scope of the cumulative and in-combination assessments undertaken for the Scheme, as well as the assessments contained in the Applicant's Habitats Regulation Assessment documentation generally, are considered to be robust. Mitigation and enhancement measures are currently under discussion with the RSPB and Natural England and agreements will ensure that the measures provided will avoid any adverse impacts on the integrity of the SPA.

	increased recreational activity surrounding Normanton Down reserve. The increase proposed is such as to result in the MoD committing to mitigation to reduce suggested potential conflict for breeding Stone Curlews. Due to the scale or magnitude of impacts being unknown, it is not unreasonable to suggest that all of the above proposed increases in activity may result in increased use of the byways bordering Normanton Down reserve and effect an increase in disturbance to breeding Stone Curlew. This could be disastrous for the SPA population that is still in 'recovery'.	
9.7.2	**Question Ec.1.2 Green Bridges: Response to point i) 1** We believe that no shelter in the form of new habitat is to be provided on green bridge 4 to provide safe passage of wildlife from predators; the area is limited to chalk grassland with no hedging. There is no assurance that bats will use the green bridges as safe crossing points. The bat data in Environmental Statement Appendix 8.1B Baseline valuation [APP-233] paragraphs 8.1.47 and 8.1.48 report in respect of green bridge 4 was contradictory stating that bat activity within this area was both the highest activity on transect surveys as well as being the lowest activity recorded at the Longbarrow Junction. This highlights that more survey work would be needed to further understand the baseline use of this area by bat species.	See response to item 40.3.39 in the Comments on Written Representations [REP3-013]. Green Bridge No. 4 is not designed specifically to provide mitigation for bats, however, the green bridge would provide a safe route for any bats currently using the area. It is considered that Green Bridge No. 4 would provide enhancement because it would improve the permeability of the landscape for wildlife.
9.7.3	We would like HE to have specifically mentioned which "other species" they are proposing will use the green bridges other than bats. There is little difference between the species on either side of the road, therefore there will be no net gain. The spreading of [redacted] populations within the WHS is having a seriously damaging impact on a large number of scheduled monuments within the WHS already. [redacted] are believed to transmit TB. By encouraging [redacted] into the wider area there is the potential risk that TB may be spread to our livestock. This would have a negative impact on our farming business.	The green bridges will maintain a permeable landscape for a number of different species, these include, but are not limited to, the following species and species groups: • bats; • polecat; • hedgehog; • barn owl; • invertebrates (including butterflies of chalk grassland). All these species and groups would be able to cross more safely than with the existing A303.

	The requirement for fencing would also be important as dogs straying from the byway have the potential to disturb wildlife using the green bridges.	The baseline surveys undertaken by AAJV within 2016-2017 identified the following [redacted] setts within the study area on M & R Hosier's land: • three active main [redacted] setts; • one active annex sett; • one active subsidiary sett; • one partially-used subsidiary sett; • six active outlier setts; • one partially used outlier sett; and, • one disused outlier sett. [redacted] social groups are present both north and south of the Scheme centred on the main setts. As no main setts would be lost to the Scheme existing [redacted] territories would likely be maintained. See response to item 40.1.36 in Comments on Written Representations [REP3-013] in respect of TB risk. [redacted] currently cross the A303 and this would continue with the Scheme.
9.7.4	**Response to point i) 3** We were informed that the 150m width of green bridge 4 was decided upon for optimum heritage inter-visibility reasons rather than for biodiversity. We would like to see how this compares with the width of other green bridges within the scheme and whether the other green bridge widths have been secured.	The width and location of Green Bridge No. 4 was determined for heritage inter-visibility reasons. This is expanded on in paragraph 24.1.43 onwards in the Applicant's Comments on Written Representations [REP3-013]. Under item D-BIO3 of the Outline Environmental Management Plan, all green bridges which form part of the Scheme shall be designed and delivered having regard to Natural England guidance, which includes reference to optimum widths. See response to Written Question Ec.1.2 part i [REP2-027]. "*The green bridges delivered as part of the Scheme are proposed to be in line with Natural England's recommendations (paragraph 4.1) regarding green bridges, with a view to ensuring they meet the relevant objectives*."
9.7.5	**Response to point i) 4** There is no information regarding which species each of the green bridges are targeting. In respect of green bridge 4 we question the benefits of "species" crossing to the southern side, as this will link to arable land. Discussions with Highways England note that the area south of the deep cutting will vary depending on the area required for constructing the cutting, yet we	Please refer to the above response regarding species crossing Green Bridges. The precise nature of the species to be planted would be dealt with during detailed design, as part of the Landscape and Ecology Management Plan to be developed under the terms of the OEMP, as well as under the detailed landscaping scheme required to be submitted for approval under Requirement 8 of the draft DCO. There is also an obligation in the OEMP (MW-BIO2) to

	note that on Environmental Statement Figure 2.5 Environmental Master Plan that the area is coded for species-rich chalk grassland. Clarification on this contradiction is required for proper assessment of the scheme.	establish the new habitats identified within the Environmental Masterplan within the Order limits.
9.7.6	The dispersal of less desirable plant seeds in an arable situation is not beneficial to our farming business. We have experience of reversion of land to chalk grassland; during the first three years many undesirable and injurious weeds need management.	See response to item 40.3.47 in the Comments on Written Representations [REP3-013]. The LEMP, as stated in the OEMP (MW-LAN1) [REP3-006], will include management to control nuisance weeds. We agree that in any areas where arable reversion is used there will be a higher weed burden than in areas of the Scheme where a sparse sprinkling of topsoil is applied to bare chalk. Hence more weed control is expected to be needed in the early stages with arable reversion. Starting with low nutrient conditions, the preferred approach for the Scheme, is expected to produce chalk grassland habitat more readily, but the experience of M & R Hosier and National Trust shows that chalk grassland with a diversity of herb species can be created even on former arable land.
9.7.7	There is already a 6m floral enhanced grass margin running along the A303 between the western portal and the green bridge. This has been in place for 7 years and already provides a link for invertebrates and grassland flora. This should not be destroyed during the proposed scheme but compliment and be-linked to newly created grassland. We are not convinced that the measures to control notifiable weeds will be adequately dealt with within the proposed management in the OEMP. [APP-187]	See response to item 40.3.47 in the Comments on Written Representations [REP3-013]. Precise construction requirements and methodologies would be confirmed by the contractor. As such, it is not possible at this stage to confirm whether the grass margin referred to would be retained during construction – it is not considered by the Applicant to be essential to do so, given the other mitigation measures proposed. See response above regarding weeds. Control of notifiable weed would be carried out as required in both retained and new habitats.
9.7.8	**Response to point i) 5: There is no bund proposed for green bridge 4.** The deep cutting from the western portal to green bridge 4 creates a new barrier in the landscape in this location. The area currently has a 6m floral enhanced chalk grassland margin that runs along the A303 in this area. This already forms part of the baseline connectivity between the eastern and western parts of the scheme.	See response to item 40.3.40 in the Comments on Written Representations [REP3-013]. In the section of the Scheme from the western portal to green bridge four the west-east linear chalk grassland will be increased compared to the existing 6m margin and will extend to the A360. The scheme will include new chalk grassland to be created along the redundant section of the A303. The zone between the chalk grassland margin referred to here and the retaining wall of the deep cutting on the north side will have chalk grassland, and so will a zone on the south side of the cutting. The habitats on both sides will be connected by the grassland on the green bridge. Together, these new areas of chalk grassland

	The provision of the green bridge does not actually increase connectivity it reduces the connectivity within this area to 150m.	would provide greater area in total and a broader linear connection. This would be an improvement of the ecological network.
9.7.9	**Response to point ii) 6: The fauna targeted as using green bridges has not been identified.** We have concerns as to the suitability of the type of chalk grassland proposed within the OEMP [APP-187] as it is not typical of Salisbury Plain and will require a high management input to deliver the objectives. As outlined in our written representation 2] page 18 paragraph 6.15-6.21 We have only had 2 meetings with HE ecology consultants from which we understand that green bridge 4 will just be chalk grassland. There is no intention to have any hedgerow with the area. Environmental Statement chapter 8 Biodiversity [APP-046] 8.8.15 notes that green bridges will provide sheltered habitat links for fauna (as yet undisclosed), but in respect to green bridge 4 there is no shelter provided. This bridge has no bunds and no hedging. Hedging would provide cover from predation for any animals using the bridge and provide some barrier between the general public and dogs that will be using the byway over the bridge. Hedging would also provide a navigable feature in the landscape that has the potential to encourage bats to link to the other side of the carriageway. The species using the green bridge to link to the other side of the carriageway will be limited to species that are tolerant of human activity or nocturnal.	Green bridge No. 4 does not require bunds or hedgerows to be included within the design, as this would not be appropriate for the maintenance of intervisibility between monuments within the WHS. Hedgerows have not been included within the WHS as detailed within paragraph 21.4.44 of the Comments on Written Representations [REP3-013], as this may have a negative impact on heritage within the WHS. Woodland and hedgerow planting would be included in other areas of the Scheme, where there is a specific requirement. Management by grazing will be considered for incorporation into the Scheme as referred to at MW-BIO13 of the OEMP [REP3-006]. The locations to be managed by grazing will be secured through a combination of the detailed landscaping scheme to be submitted under Requirement 8 and the LEMP, prepared under the framework contained in the OEMP (MW-LAN1) [REP3-006]. Applying a range of management within the Scheme will be beneficial to overall biodiversity.
9.7.10	**Response to point iii) 7** We note that Environmental Statement, Figure 8.10 Barn Owl Habitat Suitability and Road Casualties) [APP-158] contains a number of errors. Areas on our farm that have been permanent grassland since 2002 have been incorrectly classified as ‘Other non-grassland habitats with little or no value for foraging barn owls’.	The most valuable foraging areas for barn owl are coarse or tussocky areas of grassland that provide cover and foraging areas for abundant small mammals. This structure can be achieved by appropriate frequency of mowing of grassland, for example, along arable field margins or woodland edges. Sparsely vegetated or short chalk grassland is less favourable for the small mammals on which the owls feed.

	Normanton Down Reserve has never been surveyed by HE consultants and yet they have classified it as 'Type 2 Sub optimal foraging habitat'. This is incredible as there are nest boxes within the barn on the Reserve that regularly host breeding Barn Owls, Little Owls and Kestrels and are monitored annually by staff of the Hawk Conservancy Trust. Grassland of the Reserve is managed such that different grass heights are available. There are other questionable areas on the map that are noted as 'Type 1 Optimum foraging habitat' which are close to woodland. Barn owls require a taller grass sward 4 for optimum habitat, which can be easily created and managed by the correct grazing regime. The intention to provide a low open sward in the area of chalk grassland creation between the existing A303 and the cutting from the western portal will not provide optimum foraging habitat for barn owls unless it is left to grow longer. There are another 4 areas on the map (neighbouring Environmental Scheme grassland that borders Boreland Farm) which has also been incorrectly classified as 'Other non-grassland habitats with little or no value for foraging barn owls'. These areas regularly consist of longer grass which provides good habitat for Barn owls and their prey. We question the noting of woodland as habitat for Barn owls. Apart from being factually incorrect as the Barn owl does not frequent woodland habitat, it is habitat for the Tawny owl, which if present, being more aggressive would drive Barn owls away. This inaccurate poor-quality baseline data does not provide an accurate assessment of the current ecology of the area or of the ecological benefits of the scheme once in operation. The current surveys would suggest that the scheme will benefit the ecology of the area, yet this is based upon a realistic representation of the area. We suggest that old inaccurate desk top data has been used in preference to physical surveys. There has been no updating following field surveys as noted in	Whilst detailed field by field mapping of habitat suitability is of value for a farm conservation management plan, the level of detailed survey proposed by M & R Hosier is not required for the purpose of the ecological assessment of the Scheme. As detailed within the RSPB SoCG [REP2-017], due to the well-documented barn owl monitoring undertaken within the surrounding area, no further barn owl roost/ nest surveys were considered necessary. This was also agreed with Natural England [REP2-016]. The purpose of the barn owl habitat suitability appraisal was to assess whether the Scheme would result in a significant adverse effect on the local barn owl population. It highlighted the likely important foraging areas, within the wider landscape, using a combination of vantage points from PRoWs and aerial mapping. As stated in paragraph 8.9.216 of Chapter 8, of the Environmental Statement [APP-048], barn owls are vulnerable to direct mortality associated with road traffic collisions. The data shows a hotspot of mortality at the existing A303. Barn owls crossing the A303 in this section are at risk. Putting the A303 in a tunnel will remove this risk. Having the Scheme in a vertical-walled cutting to the western portal also reduces the risk of barn owls flying close to traffic. There is high confidence that the Scheme will make conditions safer for barn owl. Hence barn owls on M & R Hosier land would have reduced risk of mortality from the A303.

	Environmental Statement chapter 8 Biodiversity [APP-046] page 8-24. We question if the surveys were undertaken.	
9.7.11	**Response to point iii) 8** Selected areas of our farm have been walked as part of the 'Porton to Plain Project'. From this and our knowledge of the area and the surrounding land, leads us to question some of the findings within the report. Maps are too small to see clearly and it would appear that some of the data is out of date. As noted in the DCO documents, non-presence of a species does not mean that it is not present. We believe that comprehensive surveys of the whole area should be undertaken for all the target species at the correct time and with the correct methodology to provide accurate base line information.	All ecological surveys are considered to be a snapshot in time; the scope of the survey data presented as part of the DCO application was considered suitable and proportionate to the Scheme. This has been agreed with the statutory and non-statutory consultees, including, Natural England, the RSPB, and Wiltshire Council.
9.7.12	**Question Ec.1.7 Habitat creation: Response to point 3** The location of the deep cutting from the western portal to the green bridge is shown in the various DCO documents as having an area of chalk grassland creation between the current A303 and the cutting. We have previously asked HE why the red line boundary on the opposite side of the cutting (between the cutting and our land holding) is so wide. We have been informed by HE that this area may not need to be as wide as shown in the plans; it being for the construction process, hence the full area may not be required. At no point have we been told of any other proposals for this area. However, the Environmental Statement Figure 2.5 Environmental Master Plan shows maps with mitigation indicated along the length of the Scheme. Map sheet 15 and 16 Have colour coded the whole of the area as species rich chalk grassland rather than just the area between the cutting and the existing A303. At no time has the area to the south of the cutting been discussed at meetings as we were led to believe that it was a flexible area for construction purposes alone. The cross-sectional	Consistency of land use to the north and south of the cutting and over the top of the land bridge is essential in order to mitigate the adverse impact of the cutting on the OUV of the WHS. Chalk grassland restoration is the preferred land use to complement the treatment of the de-trunked section of the A303 to the north and the landscape treatment at the top of the cutting. Management by grazing will be considered for incorporation into the Scheme as referred to at MW-BIO13 of the OEMP [REP3-006]. The locations to be managed by grazing will be secured through a combination of the detailed landscaping scheme to be submitted under Requirement 8 and the LEMP, prepared under the framework contained in the OEMP (MW-LAN1) [REP3-006]. Applying a range of management within the Scheme will be beneficial to overall biodiversity.

	drawing page 19 chainage 6750 G1 shows the area just prior to green bridge 4. It also notes the presence of species-rich grassland on the southern side of the carriageway. Management of this area for species-rich chalk grassland would be complex, poor value for money with debatable returns for biodiversity benefits.	
9.7.13	**Response to point 4** We have concerns about the establishment methods, management and proposed seed mixtures. Contradictions within OLEMP [APP-267] page 3 2.1.4 f) to use native indigenous species of local provenance wherever appropriate. Also, page 9 6.1.2 ..."A seed mix with affinity to CG2 grassland would, with appropriate management, meet these requirements". Page 9 6.1.3 the intention to overlook using brush-harvested seed from Salisbury Plain Training Area is astonishing when with planning brush-harvested seed can be stored. The intention to not include certain locally represented floral species due to their height is questionable. See written representation M & R Hosier Appendix 1. Page 18 6.15 to page 19 6.21. 2]	Due to the large area of calcareous habitat to be seeded and uncertainty about the quantity of brush-harvested seed that may be available at the time required, it is not considered appropriate to restrict seeding of the Scheme to wild-harvested seed from Salisbury Plain. Selective use of some wild-harvested seed could be included in the detailed landscaping scheme at some locations – this would be finalised during detailed design and contained in the scheme submitted for approval under Requirement 8 of the draft Development Consent Order. As described in the OLEMP [APP-267], the objectives will be to create a mosaic of early-successional habitats ranging from bare ground to a tight sward of species-rich low nutrient swards.
9.7.14	**Response to point 5** Management measures stated in OLEMP [APP-267] page 13, 7.1.2 and 7.1.3 are not methods that have been successfully proven on site at Normanton Down. A mowing regime is not beneficial to grassland establishment and is incredibly destructive to invertebrate biodiversity. Although not stated, we assume that invertebrates are the key species targeted for biodiversity. See M & R Hosier Written Representation Appendix 1 page 17, 6.6 to 6.12, page 19, 6.19 and 6.20. We question what the 'other objectives' are that HE refer to as benefitting from the mowing of chalk grassland. Mowing as a management tool is unlikely to benefit any biodiversity, being destructive to invertebrates, small mammals, nesting birds such as skylark that need to undertake several nesting attempts during the season; mowing results in the loss of the entire habitat where it is undertaken.	As detailed on page 1 of the Butterfly Conservation Written Representation [REP2-193], they are supportive of the habitat creation and management techniques that have been recommended. "*BC supports the proposals for chalk grassland creation as outlined in the submitted version of the OLEMP*." Butterfly Conservation highlight where suitable mowing and collection measures that have been successfully implemented during the habitat creation of the A354 Weymouth Relief Road, Dorset. Management by grazing will be considered for incorporation into the Scheme as referred to at MW-BIO13 of the OEMP [REP3-006]. The locations to be managed by grazing will be confirmed through a combination of the detailed landscaping scheme to be submitted under Requirement 8 and the LEMP, prepared under the framework contained in the OEMP (MW-LAN1) [REP3-006].

		Applying a range of management within the Scheme will be beneficial to overall biodiversity.
9.7.15	**Question Ec.1.17 Stone curlew: Response to point iv) 5** OEMP [APP-187] various mitigation methods are proposed for limiting the impacts of construction works on Parsonage Down Stone curlew plot. Little detail is provided of what visual screening actually entails. Page 24, Stone curlews b), planting areas of temporary bare ground with quick growing crop/wildflower/game cover. With correct planning the Preliminary Works would take place just prior to construction works in areas where Stone curlews have historically frequented, that way there would be no suitable habitat available for them to prospect for nesting ie bare ground. Areas cleared for construction will presumably have no or little topsoil, so will not be able to quickly grow any crops. Having farmed the local land for three generations, we can say that establishment of quick growing crops is, in reality, not that quick to give coverage to such a level that Stone curlew would be deterred from nesting. Crop establishment could take four or five weeks under good growing conditions and with normal levels of topsoil.	Mitigation measures to be implemented in respect of stone curlew are contained in PW-BIO5 and MW-BIO8 of the OEMP. Such measures include the carrying out of works in accordance with method statements where those works have the potential to disturb breeding birds and liaison with RSPB should stone curlew be found within the Scheme boundary or a 500m buffer zone, to determine the most appropriate measures to be implemented to avoid disturbance. Maintaining areas with soil and dense crop or grass is one of the means by which a contractor would be able to minimise the likelihood of stone curlew occupying areas required for construction. Once topsoil stripping and excavation of the Scheme commence, the construction activity within the order limits would be a deterrent to stone curlew establishing territories there.
9.7.16	**Question Ec.1.18 Stone curlews: Response to point i) 1** We question why HE have not used the software package known as Stone-Curlew Access Response Evaluator (SCARE) modelling to aid the evaluation of the impact of specified disturbance at Normanton Down reserve which was developed by Taylor et all. [5]. The current situation of unknown level of disturbance caused by the new scheme would cause to affect the breeding Stone curlew at the Reserve is unsatisfactory. Taylor et al report [5] research found that people on foot disturbed Stone Curlews at 450m but this is only a guideline, and that if the disturbance has not been regularly encountered before some disturbance can occur at distances of greater than 300m. Our personal experience has found	The Stone-Curlew Access Response Evaluator was not used in this scenario as it was considered that use of information gathered by the RSPB over the past 11 years within the area was sufficient. It has been agreed within the SoCGs with Natural England and the RSPB that the information to inform the Environmental Statement was suitable and proportionate to the scope of the Scheme. The OEMP has been amended (in PW-BIO5 and MW-BIO8) to refer to a buffer zone of 500m from the scheme boundary, within which measures need to be taken should stone curlew be found during construction. Liaison will take place with RSPB to determine the most appropriate measures. The measures that have been incorporated into the Scheme (replacement and enhancement measures) are considered suitable measures for any disturbance

	that not all pairs of Stone Curlew follow these guidelines. Therefore, to promote the biodiversity benefits of the scheme we suggest a 'buffer zone' of 500m as a minimum should be adopted as best practice, especially when taking into account the unknown level of recreational disturbance being encouraged into the southern half of the WHS.	impacts associated with the operational phase of the Scheme. Discussions are ongoing with Natural England and the RSPB with regards to the reaching formal agreement on these measures.
9.7.17	**Response to point ii) 3** As evidenced by the Stone curlew that nested on the Archaeological Survey area at the western portal during 2018, it is imperative that Ecology Clerk of Works and ecology team has a good understanding of Stone curlew behaviour with previous experience. Even experienced staff can find the birds challenging to locate on occasions due to the birds' camouflage. The Environmental Statement states that monitoring will continue until Stone curlews are no longer utilising the nest site. This shows a lack of understanding of species behaviour; Stone curlew breeding can span 68 days; 26 days of incubation and up to 42 days of chick rearing [6]. Chicks are entirely dependent on their parents for food and foraging will occur within 3km of the nest [7]. Regulations within the Wildlife and Countryside Act 1981 (as amended) protect all nesting birds during their breeding cycle; this includes feeding of young until fledging. HE should recognise that if Stone curlew nest within the construction area, works will have to cease for a period of up to 10 weeks to comply with legislation. Environmental Statement chapter 8 biodiversity [APP-046] page 8-57 para 8.9.35 notes the potential for disturbance if birds are foraging in the area of the scheme. This is recorded as a 'low frequency occurrence', but from our experience the birds are frequently drawn to this area to feed on the invertebrates associated with the outdoor pig unit. This is especially noted during the late summer months when the birds are feeding their young.	To clarify, stone curlews will no longer be considered to be utilising the nest once all of the chicks are no longer dependent on the nest. The monitoring of nest usage would continue until then. This may extend beyond a 10-week period or before, depending on the status of the nest. As stated in PW-BIO5 and MW-BIO8 an appropriate specialist will undertake the stone curlew monitoring. The pig unit would remain within foraging range for stone curlew so the foraging opportunities would not be lost.

9.7.18	**Question Ec.1.20 Impact on habitats: Response to point 2** Ground investigations and archaeological surveys have been supervised where appropriate by an Ecology Clerk of Works. However, due to the ecology team being inexperienced regarding behaviour of Stone curlew, the RSPB Stone curlew team were called on a number of occasions to teach them the necessary Stone curlew behaviour signs and locate the birds when they could not be spotted. It is alarming that being a high-profile species that there were not adequate experienced staff on the ecology team. We question how and who will assess the main contractors' ecology staff to ensure they have relevant and adequate knowledge with key species. Our request for a copy of the written document detailing measures to be adopted should Stone curlew breed within the area were never provided. Instead this was covered by a paragraph in an email stating that RSPB did not consider that a Stone curlew would nest in the survey area. From that we deduce that there was no document in respect of nesting Stone curlews within the survey area detailing mitigation.	See response to item 40.4.8 in the Comments on Written Representations [REP3-013]. The ground investigations and archaeological surveys were supervised by an Ecology Clerk of Works (ECoW), with several staff overseeing the works in this capacity in different areas. It included staff with prior experience of working with stone curlew. It was a member of the ECoW team who identified stone curlew breeding behaviour in an area formerly used for pig farming. When that area was in use by pigs it would have been unfavourable for nesting due to the high risk of loss of eggs to predation by pigs and by the crows which are attracted to food in the pig enterprise. In addition to the work of the ECoW, Highways England has been working closely with the RSPB. It was stated within the method statements for the works that should stone curlew be identified within 500m of the working area the RSPB would be consulted. During this time Highways England and the RSPB worked in close collaboration. *"I would consider the response to the breeding attempt to be an excellent example of organisations working well together with the common objective of affording the nesting attempt the best chance of success. This augers well as it is possible this situation could arise again given the nature of the groundworks over the course of the scheme."* (RSPB personal comms date 18th July 2018, Mrs Rachel Hosier CC'd). It should be noted that consultation with the RSPB, should stone curlew be identified within the Scheme boundary or within the 500m buffer zone, forms part of the stone curlew disturbance avoidance measures as detailed within the OEMP [REP3-006].
9.7.19	Our holding has proved very important for the Great Bustard reintroduction project and we have had both visiting and nesting Great Bustard on our land, we have a vested interest in protection of this species. We also note that HE did not consult with the Great Bustard Group (GBG pers.comm) prior to commencing the archaeological surveys on the landscape in Spring 2018. GBG were not informed of where the surveys would take place or how long they would last. GBG were not asked if Great Bustards were prospecting in those areas for nesting and GBG	PW-BIO5 and MW-BIO8 within the OEMP [REP3-006] have been updated to include Annex 1 species. In the revised version of the OEMP submitted at Deadline 4, further clarification has been included to detail that the measures in PW-BIO5 and MW-BIO8 will be extended to include great bustard. Additional to this, the Great Bustard Group will be consulted during the construction phase (MW-BIO8) and this will be included within the updated OEMP submitted at Deadline 4. These measures are considered suitable to avoid disturbance of great bustard. It should be noted that there was consultation with the Great

	were given no contact details for the ecology clerk of works. Furthermore, there were no discussions with GBG regarding what procedures HE surveyors should follow should a Great Bustard be found to have put down a nest during the survey period. This is a gross error being that Great Bustard is also a Schedule 1 bird covered by the Wildlife & Countryside Act 1981.	Bustard Group by telephone and email in April 2018 prior to the commencement of archaeological surveys around Longbarrow junction.
9.7.20	**Question Ec.1.22 Great Bustards: Response to point i) 2** There seems to be no consistent approach in respect of the Great Bustard and how it is considered within the scheme. There are very few references to this species:- • Appendix 8.1B Biodiversity [APP-233] the species is noted of National Importance /High Value. It is also listed under Annex 1. Annex 1 birds are given additional protection under European law being a species for which an SPA can be designated. • The UK population of Great Bustard is currently only found within the Salisbury Plain area, being the location of the Great Bustard Recovery Project. • The Scheme is billed at delivering biodiversity benefits and yet it seems to continually overlook the Great Bustard despite it being a very high-profile species nationally and one that visitors to the area are keen to spot. • The Environmental Statement chapter 8 Biodiversity [APP-046] table 8.7 Summary of the study area for likely important biodiversity features does not include the Great Bustard. • There were no field study methods or dates of survey recorded in table 8.8 as per other noteworthy species. Page 8-36 table 8.12 Summary evaluation of species and species assemblages does include the Great Bustard, with page 8-39 referring to the area as 'the only known	See response to item 40.3.18 in the Comments on Written Representations [REP3-013]. Although the great bustard is not currently afforded protection under Schedule 1 of the Wildlife and Countryside, status of the population was given recognition as nationally important in the Environmental Statement Chapter 8 Biodiversity [APP-046]. The assessment is summarised in paragraphs 8.9.141-8.9.144 [APP-046]. It is not feasible for the Scheme to provide biodiversity net gain for all species and habitats. Only land which is essential for the Scheme for one or more purposes can be taken by compulsory acquisition. Within those limits, the Scheme will provide new habitats to benefit biodiversity, mainly that associated with chalk grassland. It was considered that the habitats created within the Scheme would be too close to the A303 to be attractive as nesting areas for great bustards. Whether the more extensive new chalk habitats at East Parsonage Down would attract great bustard to feed would depend on subsequent management. The Applicant did not assume that great bustard would nest at East Parsonage Down and did not state this as a benefit of the Scheme. On the MoD land on Salisbury Plain the Great Bustard Group has found that great bustard will nest on plots provided for stone curlew, as well as foraging on arable and on other grassland (site visit with GBG, April 2019) but there is uncertainty as to whether great bustard will colonise other breeding plots provided for stone curlew in the Wessex area (approximately 250 available in 2018, according to RSPB and Natural England). It is only necessary to carry out site-specific surveys for species and habitats where there is a lack of suitable data to inform an environmental assessment. With rare bird species that are easily disturbed and for which there is ongoing monitoring in place, it is not appropriate to duplicate survey effort. When the Great Bustard Group was first approached in October 2017, there was no

	population within the UK'. We question why, considering their conservation status and when Great Bustard are observed as being largely limited to the south of the existing A303, that no surveys have been carried out in relation to the species?	request to carry out surveys in addition to the data the group provided. Natural England and RSPB were satisfied with the scope of the bird surveys carried out to inform the environmental assessment.
9.7.21	**Response to point ii) 3** The GBG have had to rely on one of their landlords for an introductory meeting with HE consultants, with minimal follow up engagement and no formal surveys carried out in relation to Great Bustard (GBG Pers.comm). The lack of regard shown by HE for such a high-profile and protected species within the Scheme area is unsatisfactory. There has been a serious lack of communication with GBG – so we fail to comprehend how HE can comment that no nest sites would be lost to the proposed scheme; HE consultants have not taken the opportunity to learn about the habitat and behaviour of the species, nor we assume the legislation surrounding it. Environmental Statement chapter 8, Biodiversity [APP-045] page 8-76 Great Bustard paragraph 8.9.144 Disturbance. This paragraph shows a lack of understanding of the behaviour of Great Bustard, noting that the birds would not be disturbed by construction as they were already used to traffic from an existing major road. There is a vast difference between road traffic and construction traffic. The presence of large machines in the hitherto undisturbed arable areas where the birds have previously nested will be a significant disturbance resulting in the displacement of breeding Great Bustard. Construction traffic will be operating within the landscape day and night, large machines with warning alarms and flashing amber beacons together with a marked increase in human presence supporting high viz jackets is not a 'temporary adverse impact'. This statement has been made with no engagement with GBG (GBG Pers. comm).	See response to item 40.3.18 in the Comments on Written Representations [REP3-013]. There had been correspondence with the Great Bustard Group by telephone and email in October 2017. Prior to a date being arranged for a one-to-one meeting with the Great Bustard Group, members of the project team met with Mrs Hosier in early November 2017 on her farm. Mrs Manvell from the Great Bustard Group also attended this meeting. During the site visit there was an opportunity to see great bustards on a winter cereal crop and to discuss the species. The 2016-2017 breeding bird surveys [APP-255] and nesting data obtained from the Great Bustard Group was considered to provide a suitable baseline for the ecological assessment of the Scheme. The scope of the baseline has been agreed with the statutory and non-statutory consultees, including Natural England, the RSPB, and Wiltshire Council. The baseline data indicated only five confirmed great bustard nesting sites within the study area at that time, the majority of which were located to the south of the Scheme. Further engagement with the Great Bustard Group will be undertaken in order to obtain updated data on the nesting birds, as it is understood from the issue specific hearings that new nest locations have been identified since the production of the Environmental Statement. PW-BIO5 and MW-BIO8 within the OEMP [REP3-006] have been updated to include Annex 1 species. In the revised version of the OEMP submitted at Deadline 4, further clarification has been included to detail that the measures in PW-BIO5 and MW-BIO8 will be extended to include great bustard. Additional to this, the Great Bustard Group will be consulted during the construction phase (MW-BIO8) and this will be included within the updated OEMP submitted at Deadline 4. These measures are considered suitable to avoid disturbance of great bustard. It should be noted that there was consultation with the Great

		Bustard Group by telephone and email in April 2018 prior to the commencement of archaeological surveys around Longbarrow junction. The potential increase in recreational disturbance is unlikely to have a detrimental impact on the local population of great bustards. However, they are less likely to nest within the close proximity of the PRoW. This is unlikely to impact the integrity of the local population due to the large expanses of retained areas.
9.7.22	**Response to point 4** Environmental Statement chapter 8 Biodiversity [APP-045] page 8-44 para 8.8 Design, mitigation and enhancement measures. 8.8.1 'The Scheme incorporates measures that have been embedded into the design to mitigate adverse effects on biodiversity features and compensate for the loss of habitats by the creation of new areas of habitat within the Scheme. It also includes working practices which would avoid impacts and provide mitigation for important biodiversity features during construction and operation. These measures have been identified and developed through the EIA process, including consultation with stakeholders and statutory bodies. The following sections outline the measures and how they would minimise the impact of the Scheme on biodiversity. Details are provided in the Environmental Masterplan (figure 2.5) and OEMP. There are no direct statements within the OEMP [APP-267] for working criteria or mitigation in relation to Great Bustards as inferred in the HE response. Page 47 MW-BIO 1 Table 3.2 (a) mentions Protected and notable species, however, Great Bustards are omitted. Page 26 PW-BIO10 lists "other notable species" but Great Bustards are omitted. HE response infers that Great Bustards will be afforded the same protection as Stone Curlew as they are an Annex 1 species with similar legal protection, but this is omitted from the OEMP.	PW-BIO5 and MW-BIO8 within the OEMP [REP3-006] have been updated to include Annex 1 species. Great Bustard is an Annex 1 species but is not listed on Schedule 1 of the Wildlife & Countryside Act. Further clarification will be included within the revised OEMP in respect of disturbance avoidance measures to be implemented for great bustard. Additional to this, obligations in respect of liaison with the Great Bustard Group have been included in the revised OEMP. These measures are considered suitable to avoid disturbance of great bustard. With regards to the survey information, the scope of the survey data presented as part of the DCO application was considered suitable and proportionate to the Scheme. This has been agreed with statutory and non-statutory consultees, including Natural England, the RSPB, and Wiltshire Council. As detailed above, obligations in respect of further engagement with the Great Bustard Group have also been included in the revised OEMP. The Public Rights of Way (PRoWs) proposed to be delivered by the Scheme are to be suitably fenced where necessary, as secured by P-PRoW2 in the OEMP. This will separate PRoW users from private land, as such, it is unlikely that users will be brought close to areas currently used by great bustards by any of the new PRoWs. The mitigation measures and embedded design included within the Scheme are considered suitable to avoid impacts on the local great bustard population.

	In addition, there have been no surveys carried out within the area to provide base line data and there has been minimal contact with the Great Bustard Group (Environmental Statement chapter 8 Biodiversity [APP-046] page 8-15 Table 8.5 Stakeholder consultations on biodiversity only two occasions compared to numerous meeting dates with statutory organisations with lesser knowledge on Great Bustards) In practice, there have been no measures incorporated to mitigate for the increase in number of PRoW within the area that will bring more people into direct conflict with nesting and feeding Great Bustard. This is shocking when Salisbury Plain is the only area in the UK where the Great Bustards are breeding and this Scheme is billed to provide biodiversity benefits.	
9.7.23	**Response to point 5** There has been no true assessment for the Great Bustard species involving the Great Bustard Group, therefore it is **an inaccurate statement** that the Scheme will not be a threat to the success of the reintroduction project. To correctly assess claims that creation of additional grassland habitat at Parsonage Down would have a benefit for the Great Bustards, would require both consultation with the GBG and survey work to be undertaken – both of which have not occurred. No work has been done to establish the disturbance response of Great Bustards to general public, with or without dogs, and to traffic volumes. We believe the area is to be open access so these surveys are crucial. Again, consultation with GBG would have corrected the assumption (dictated by Natural England) that Great Bustard is a solely grassland species. It is well documented by other countries with surviving Great Bustard populations that the species requires both arable and grassland habitats. That Great Bustards do not currently frequent Parsonage Down is not understood, but a fact which should be considered relevant with investigations undertaken to determine why the birds do not choose the area.	See response to item 40.3.18 in the Comments on Written Representations [REP3-013]. It is acknowledged that great bustard is not solely a grassland species and the use of arable in the Wessex area is recognised and was discussed with the Great Bustard Group during consultation in 2017. As stated within paragraph 8.9.143 of the Environmental Statement [APP-046], both arable and open grassland are both considered to be suitable great bustard habitat. Great bustards are unlikely to be at risk from direct mortality associated with traffic (paragraph 8.9.223 of the Environmental Statement [APP-046]). The green bridges have therefore not been included within the Scheme as embedded mitigation for great bustard. It would not be considered necessary to undertake studies to determine why a recently re-introduced species has not colonised an area of land (in this case Parsonage Down) within the large expanse of Salisbury Plain and the Wessex area and whether this is due to the individual site being unsuitable or simply a reflection of the scatter of the founder population at the present time. Further investigations into this are not considered necessary for the Scheme.

	The reference to the presence of green bridges as being of benefit to the Great Bustard also shows a lack of understanding of the birds' behaviour. As the largest British flying bird, they have no need of green bridges to expand their habitat. The bridges also include byways for general public which would result in the birds actively avoiding these structures. References to the A303 being in a tunnel as encouraging the dispersal of the Great Bustard into the wider landscape shows a lack of understanding of the birds' behaviour. The A303 road is not a barrier to Great Bustards as they already fly over the road at heights well above high sided lorries. The birds will not disperse into the area as it is an open access landscape with people and dog disturbance.	
9.7.24	**Response to RSPB WR- Deadline 2 [3]** We are pleased to note the recent clarification by the RSPB, which support the concerns made in our WR [2]. The RSPB has highlighted **that Highways England have an obligation to avoid impacts on the breeding stone-curlew population. The** RSPB also agrees with the Statement to Inform Appropriate Assessment which states that: The operation of the A303 may facilitate recreational disturbance of stone curlew at Normanton Down. The placement of the A303 in tunnel at this location will open up the area to recreational activity, potentially resulting in recreational users on the footpath through Normanton Down crossing the fence-line and disturbing the stone curlew plots. [2].	See response to item 30.1.1 and 30.1.2 in the Comments on Written Representations [REP3-013].

10 King Arthur Pendragon (REP3-084 and 085)

10.1	Response to Written Questions	
	Matter Raised	**Highways England's Response**
10.1.1	It is, and always has been, the Authorities intention to re-route, downgrade, change use, place Traffic Orders on the BOATS, to remove traffic movement in the WHS once the 'Tunnel' is complete as has been stated on numerous occasions over the years. This will result in a lack of Amenity that is of the upmost importance to the practicing of our faith, (as detailed in Doc 1) in and around the Environs of Stonehenge as is explained in the afore mentioned documents 2 & 3.	See response to item 3.2.4 in the Oral Submission Report [REP3-012].
10.1.2	This scheme would also impact on the Sacredness of the environs of Stonehenge and will negatively inpact on the Burial mounds, placing portals and works in close proximity, and in all probability result in the removal and displacement of Ancient Human remains laid to rest in the Sacred Stonehenge landscape making our ability to connect with the Ancestors and to commune more difficult and in some cases impossible.	The Draft Detailed Archaeological Mitigation Strategy (DAMS) [REP-038], submitted at Deadline 2 of this Examination sets out procedures for the investigation of burials [REP2-038], paras 5.3.36-5.3.43, and a strategy for the recovery of human remains [REP2-038], paras. 5.3.61-5.3.72, in conjunction with Article 16 of the draft development consent order [REP2-003]. The DAMS notes that "the dissemination strategy will include the transfer of the complete project archive (site archive and research archive) to Salisbury Museum for long-term storage and curation. This will preserve the archive for use in future research projects and allow continued presentation of material to the public by the Museum" [REP2-038, para 4.3.33]. As such, whilst it may sometimes be necessary for human remains to be moved in order to construct the Scheme, historic remains are to be transferred to the Salisbury Museum for their future preservation and presentation for the public's benefit. Please also refer to the response to item 3.2.5 in the Oral Submission Report [REP3-012].
10.1.3	I can Not over stress the importance in 'our' faith, the need for this physical connection betwixt and between the living and the dead in situ. It is this physical connection across Land and Time that makes Stonehenge a Sacred place to us, and any disturbance or encroachment	Highways England noted at the end of the second session of hearings that a detailed assessment of the impact of the Scheme on the Stonehenge Community, including those of the Pagan community and the Druid faith, had been undertaken through the Equality Impact Assessment (EqIA) [APP-296].

	on the Dead and their Resting places within the sacred landscape, we as Druids and Pagan Priests find totally unacceptable.	Further details on the points raised by King Arthur Pendragon are provided in the response to the Examining Authority's Written Question HW1.17 [REP2-032].
10.2	**Oral Submission**	
10.2.1	Highways England have reviewed King Arthur Pendragon's Written Question submission [REP3-084] and consider all points raised were covered within the Written Summaries of Oral submission put at Open Floor Hearings held on 22 and 23 May 2019, section 3.2 [REP3-012].	

11 Stonehenge Alliance (REP3-062 and 064)

11.1	Comments on Written Question responses	
	Matter Raised	**Highways England's Response**
11.1.1	The Stonehenge Alliance submits that Highways England, in its response to this question (REP2-021: G.1.1.), has misunderstood the obligation to which the State Party is committed under Article 4 of the WH Convention. That obligation or duty is clearly stated and exists irrespective of any means by which it might be met. The obligation is to protect the WH property. Article 5 of the Convention commits the State Party to *ensure active and effective measures* to meet that obligation. Highways England cites an unsuccessful Australian Judicial Review Case but….in quoting its comments on Articles 4 and 5 and the above Judgements, Highways England appears to suggest that the UK Government has either not seen fit to provide the active and effective measures to protect the WHS or is unwilling to accept the obligations under these Articles. The inference is that the A303 Scheme, which would result in substantial damage to and alteration of the WHS landscape, is considered acceptable because Highways England (a Government-owned company) interprets the WH Convention in a manner which allows such an outcome. We disagree: not only is there a political commitment and a moral duty of the UK Government to respect its obligations under the WH Convention, there are also clear commitments under widely and democratically agreed UK planning policy and guidance, as well as the WHS Management Plan, specifically to ensure that the obligations accepted by the UK Government under the Convention are carried out. Indeed, the Government's obligations in respect of the Convention are helpfully set out by Historic England/HBMCE in its WR (REP2-100), notably at paras. 2.8–9, 2.18 and 3.8).	The submission from Stonehenge Alliance misinterprets Highways England's position in terms of the effect of Articles 4 and 5 of the World Heritage Convention and how they have been implemented in the UK. The Applicant has set out its position in detail in response to Written Question G.1.1 [REP2-021], and Stonehenge Alliance is also directed to the Applicant's written summary of oral submissions made at ISH2 in relation to cultural heritage on 5 June 2019 (submitted at Deadline 4) including Appendix A to that summary which deals with the implementation of the convention and addresses the case law on interpretation of Articles 4 and 5. As set out in response to G.1.1, Highways England's position is that the World Heritage Convention **has** been implemented in the UK by the State Party, and there are consequently appropriate and effective measures in place for the protection of world heritage sites. As per the response to G.1.1: "*The UK has taken the steps required by Articles 4 and 5 (in particular Article 5) by putting in place the UK legal and policy framework in connection with the assessment and consideration of harm to heritage assets – namely, the UK's national policy statements, NPPF, Planning Act 2008 provision, and established approach to assessment of impacts on heritage generally and the balancing of factors in decision making. The protection and conservation of world heritage sites is integrated into the comprehensive planning programme in the UK for nationally significant infrastructure projects (as required by the Article 5(a)), and the appropriate measures taken by the UK in legislation and policy surrounding planning decisions including the NPSNN for the protection, conservation, presentation and rehabilitation of world heritage sites (required by Article 5(d)) place great weight on their harm. It follows that the application of the planning balance envisaged in the NPSNN, by the Secretary of State, would be in accordance with Articles 4 and 5. The NPSNN accordance table in Appendix A of*

	It should be emphasised that these commitments relate to the WH property and not simply to its OUV and that major changes to the form or configuration of the WHS would not allow the WHS or its OUV agreed at the time of designation to be transmitted to future generations. Allowing the A303 Scheme to proceed would clearly be in breach of the Government's obligations under the WH Convention whether or not Highways England agrees.	*the Case for the Scheme and NPS Accordance [APP-294] demonstrates that the Scheme complies with the requirements of the NPSNN with respect to the WHS*." The Government's obligations under the World Heritage Convention are recognised and understood. The Scheme's compliance with relevant legislation and policy is set out in the 'Case for the Scheme and NPS Accordance' [APP-294]. A decision to grant consent for the Scheme in accordance with the National Policy Statement for National Networks (NPSNN) would not lead to the United Kingdom (UK) being in breach of its international obligations pursuant to the World Heritage Convention.
11.1.2	Highways England do not appear to have properly answered the part of the question which requested information on the budget available at the time that the 4.5 kilometre tunnel was rejected. Instead they state that the "budget set for the Scheme at the time was for the estimated cost of the 2.9km long tunnel option, being the basis on which the Government had announced the inclusion of the Scheme in its Road Investment Strategy." In other words, the budget was whatever the project including a 2.9 kilometre tunnel would cost. At that time, this was estimated to be £1.385 million. Given that the project cost is now estimated to be £1.7 billion and the tunnel has been lengthened to 3.3 kilometres, the current proposal should logically be rejected on this basis. Elsewhere in their response, they state that the 4.5 kilometre options were considered to be unaffordable. Given the high cost and extremely weak economic case (even if one accepts Highways England's assessment of benefits, which Stonehenge Alliance does not) for the project, this should also apply to the current proposal.	The proposed Scheme submitted for development consent has emerged as the optimum solution from an exhaustive appraisal of options as summarised in the ES Chapter 3: Assessment of Alternatives [APP-041]. The benefits of this optimised Scheme, along with its legal and policy compliance, are set out in the Case for the Scheme and NPS Accordance [APP-294]. The estimated capital cost is stated in the Funding Statement [REP2-005]. In relation to the business case decision-making on the Scheme, that is a matter for the Government. If development consent is granted, the Department for Transport (DfT) will weigh the costs and benefits of this optimum solution as part of the Government's final investment decision on the Scheme before starting construction.
11.1.3	In paragraphs 20 to 22 of their response to this question, Highways England refer to modelling of the impact of the corridor D options and Option F010 on local roads, as reported in Chapter 10 of the Technical Appraisal Report. They assert that Option F010 "interacts less effectively with the local road network than D061 and D062 and is likely to increase traffic using the local road network, particularly the roads north of the A303". However, the results show that:	WebTAG's 'Guidance for the Technical Project Manager' (May 2018) advocates an approach to scheme appraisal that is proportionate. Paragraph 1.3.3 notes that proportionality covers design and specification, cost estimation and data and analyses. The WebTAG unit on 'The Transport Appraisal Process' (May 2018) advocates a proportionate approach to options development. Paragraph 1.1.3 notes that proportionality is a key part of appraising options development through

	• The modelling is not very robust – it is implausible that no traffic would use the A3086 eastbound in the Do Minimum, or in either direction with the Corridor D options; • Forecast traffic flows are relatively low in the Do Minimum, suggesting that congestion is not a major problem on these roads; • Far from increasing traffic, Option F010 reduces total traffic on each of these route sections, and it is hard to argue that it would result in unacceptable traffic volumes. In paragraph 23, Highways England assert that there would be higher levels of rat running with Option F010. They do not define rat running in their response. In principle this could cover two impacts: • drivers regularly selecting an alternative route to avoid predictable congestion, and • spontaneous re-routeing to avoid unexpected delay due to incidents or day to day variation in traffic volumes.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	an objective-led and evidence-based approach. Paragraph 2.12.18 notes that the main scope of proportionality in approach relates to modelling. Section 3.2 of the same WebTAG unit notes the requirements of the Transport Model. Paragraph 3.2.2 of the guidance notes that a model used in Stage 2 'Further Appraisal', which is undertaken on a "small number of better performing options", requires a more detailed representation of the transport network and more detail in the dimensions of the model and "demonstrate a superior standard of calibration and validation against contemporary observed traffic/travel characteristics". The guidance notes in paragraph 2.2.19, that Stage 1 'Option Development', requires analysis tools that are 'fit for purpose for the stage of appraisal and need to provide analysts with sufficient information to understand current and future travel demands at the level of detail required'. Chapter 10 of the TAR [REP1-031] describes the traffic modelling undertaken in compliance with these requirements. The Highways England response to Al.1.11 [REP2-024] summarises the interpretation made explaining the relative merits the F10 route relative to the tunnelled route options. For more information on this point, see agenda item 8 in the written oral submission for ISH6, submitted at Deadline 4.
11.1.4	Highways England refer to the economic appraisal of options in the Technical Appraisal Report. The appraisals in Tables 11.9 and 11.10 show that the indicative BCRs of options D061, D062 and F010 are very similar, with Option F010 performing – if anything – slightly better than the others. The economic analysis does not support the decision to drop Option F010, since the reduction in benefits broadly matched the reduction in costs.	As noted in response to Written Question AL.1.11 [REP2-024], the 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, would pass through and cause significant effects to a largely unspoilt, high-quality tranquil landscape and would have a much larger footprint and a greater overall impact. 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. In assessing value for money, a range of non-monetized cost and

	It is also worth noting that taking the £652 million cost of Option F010 and adjusting it pro rata to the shorter length of the preferred alignment gives a cost of around £390 million for a surface route. This is broadly consistent with other dual carriageway projects. This exceeds the current benefits, excluding cultural heritage, of £352 million. This shows that the project would not represent good value for money, even without the extra costs of tunnelling under part of the World Heritage Site.	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. 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.
11.1.5	In paragraph 22 of their response, Highways England state "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 could directly impact as yet unidentified archaeological remains that relate to the OUV of the WHS." We agree with this statement. However the same argument applies with even greater force to major road construction within and immediately adjacent to the World Heritage Site, as proposed by Highways England. This is among the reasons why we oppose this project in its entirety.	See the Applicant's written summary of its oral submissions made in relation to agenda items 4(i) and 4(iii) at ISH2 on 5 June 2019 (submitted at Deadline 4), regarding the World Heritage Site in context; and agenda item 5(i) regarding the adequacies of content, analyses, assessments and conclusions of the Heritage Impact Assessment. The Applicant disagrees with the Stonehenge Alliance in regard to the level of uncertainty with regards to archaeological remains that contribute to the OUV of the WHS in comparing the F010 route with the Scheme. As noted in the Applicant's response to Written Question Se.1.18, "a comprehensive programme of archaeological evaluation has been undertaken, reflecting the sensitivity of the archaeology. As a result, a lot of the uncertainty as to archaeological finds has been removed, compared with other schemes." [REP2-024, paragraph 9]. As stated in response to Written Question Al.1.12, 'The F010 route has not been subject to systematic archaeological evaluation and is likely to contain further previously unidentified prehistoric or later remains of national importance and/or remains that may contribute to the OUV of the WHS, whereas the tunnel options are situated within a landscape that is relatively well understood archaeologically and has been the subject of previous systematic archaeological investigations.' [REP2-024, paragraph 27].
11.1.6	In Paragraph 7 (k) of their response Highways England refer to "Development and realism testing of the Variable Demand Model (VDM) in Chapter 12" [of the Transport Model Package Appendix]. This is highly misleading. As Chapter 12 makes clear "Calibration of the VDM was undertaken across all five of the RTMs and the resultant calibration	In paragraph 6.1.1 of their representation [REP3-063] Stonehenge Alliance allege that the Variable Demand Modelling (VDM) undertaken for the A303 Amesbury to Berwick Down appraisal is inadequately explained.

	parameter values justified at the total RTM level. The VDM has not therefore been re-calibrated as part of the 'A303 Stonehenge SWRTM (DCO)' model refinement"[1]. Accordingly no "development" of the model occurred. Instead Highways England have only undertaken "realism tests" through which they claim to demonstrate that the responses are plausible. No details of the parameters and their values within the Variable Demand Model have been provided. It is in effect a "black box" and the Planning Inspectorate is asked to accept it on the basis of limited sensitivity tests. Without this information, we cannot be confident of its reliability for assessing this project.	The VDM undertaken for the A303 Amesbury to Berwick Down appraisal used the Department for Transport's (DfT's) standard VDM software package DIADEM (Dynamic Integrated Assignment and Demand Modelling). DIADEM is identified in WebTAG unit M2 as an appropriate tool for this purpose and WebTAG unit M2 provides a detailed specification of the functions applied. All five of Highways England Regional Traffic Models (RTMs) utilise DIADEM ensuring appropriate use in scheme appraisal. The SWRTM, along with the other RTMs, has been approved by Highways England for use in the strategic level assessment. As explained in the model development package [APP-300 paragraph 2.4.5], the VDM element of the A303 Amesbury to Berwick Down appraisal was developed from the standard SWRTM VDM. The SWRTM demonstrated sensible outturn elasticities from realism testing, which compared well with published sources. Realism tests were undertaken, aligned to guidance given in WebTAG Unit M2, which demonstrated that the VDM response for the 'A303 Stonehenge SWRTM (DCO)' model was not materially different to the satisfactory response and sensitivity of the standard SWRTM. Therefore, no re-calibration of the standard VDM parameters developed for the SWRTM would be appropriate. This is demonstrated in Chapter 12 of the Transport Model Package [APP-300]. In developing the Regional Transport Models the median coefficient values set out in WebTAG M2 Tables 5.1 and 5.2 were demonstrated to be appropriate through realism testing and were retained. The model formulation, parameters adopted are compliant with WebTAG M2 and the sensitivity is demonstrated to be suitable in accordance with guidance.
11.1.7	In their response to this question, Highways England explain how traffic flows throughout the South West Region Traffic Model area were simulated. However, the project is close to the eastern boundary of this area. Beyond this boundary, fixed travel speeds were assumed in the modelling, as noted in the Combined Modelling and Appraisal Report[2]. Accordingly changes in congestion east of the A34, including on the M3, M4 and M25 motorways would not have any impact on usage of the A303 in the model. Given that the majority of trips start or finish in this area[3], and the high level of future congestion predicted (see paragraph	See response detailed in the oral submission for ISH6, agenda item 3, submitted at Deadline 4. Paragraph 6.2.1 of Stonehenge Alliance's Comments on Responses to Examining Authority's Questions [REP3-063] comments on modelling of the M3. Paragraph 16.4. 36 – 16.4.41 of the Comments on Written Representations [REP3-013] responds directly to the Stonehenge Alliance's allegation that simplified modelling of the M3 is of concern, explaining that appropriate and proportionate assumptions based on DfT national modelling were applied.

	5.6.2 of our Written Representation on Transport Planning and Economics), this is a significant concern.	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. This is approximately 50 miles away from the Scheme in terms of highway travel distance and 45 miles away from the Scheme in direct non-highway terms. It is worth noting that the representation of this as being 'nearby' is somewhat misleading given the Farnborough section of the M3 is over 50 miles east of the Scheme and the point where the network performance is fully modelled ends on the M3 south of Basingstoke 30 miles east of the Scheme approximately 35% of the traffic which routes through the A303 also routes via the M3 near Farnborough. As such, it is thought that the approach taken of applying assumptions of speed changes to the external network is proportionate and appropriate.
11.1.8	In their response to this question, Highways England produce a table which uses Trafficmaster data to show average journey times on selected days, relative to the day on which journey times were fastest. They allege that this shows that significant delay occurs throughout the year. We do not know on which day journey times were fastest but the average speed on this day was approximately 95 km/h, based on the quoted journey time of 14 minutes, 43 seconds and a route length of 23.3 kilometres[4]. Given that this route section involves negotiating 2 roundabouts and passing through Winterbourne Stoke, this suggests a low proportion of goods vehicles and close to free flow conditions. It is unrealistic to expect any road that carries significant volumes of traffic to experience free flow conditions throughout the year. In fact, the table shows that the level of delay (relative to the fastest day) was less than 5 minutes on at least 265 days of the year. In reality it shows that substantial delay only occurs on relatively few days. 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	Paragraph 6.3.1 of Stonehenge Alliance's Comments on Responses to Examining Authority's Questions [REP3-063] responds to Written Question Tr.1.11 and argues that the average speed recorded in Trafficmaster data represent close to free flow conditions. The response provided fails to acknowledge that over half of the 23Km route distance is on dual carriageways where uncongested speeds may be close to 70 mph. Nevertheless, Highways England agrees with the conclusion that this provides a reasonable estimate of the time required to traverse the route in reasonably uncongested conditions. Highways England would not agree with the assertion that delays of over 5 minutes on average over 100 days of the year could be described as a 'few days'. Table 5-18 and 5-19 of the traffic forecasting package [APP-301] set out the forecast journey time changes along the A303 arising from the Scheme. These are the dominant source of user benefits and cannot be interpreted as 'imperceptibly small' as suggested in paragraph 6.3.2 of the representation. The Scheme is designed to accomplish a number of objectives and it is inappropriate therefore to assert that the Scheme is a bad investment from a partial consideration of only one particular objective. See also written oral submission of ISH6 regarding traffic and transportation, agenda item 3.

	not generated by imperceptibly small journey time reductions for a large number of trips. We also note that only 6% of the benefits (£25 million) relate to Heavy Goods Vehicles, so the project is forecast to have only limited freight benefits. Finally, the overall benefits of the project to business – including Wider Economic Benefits - only amount to 19% of its costs, demonstrating that it is an extraordinarily bad investment from a business perspective.	
11.2	**Comments on updated funding statement (REP2-005)**	
	Matter Raised	**Highways England's Response**
11.2.1	This document purports to show that £1.7 billion is available to fund the project, so that it could proceed without delay if approved. However it contains an important caveat that means that this cannot be relied on. In paragraph 3.1.9, Highways England quote paragraph 5 of the latest Budget Statement as follows "The government is still committed to pursuing these projects [A303 and Lower Thames Crossing], subject to scrutiny of the relevant business cases which are still in development." As we argued in our Written Representation on Transport Planning and Economics issues, the business case for this project is very weak and subject to significant uncertainty, therefore there must be considerable uncertainty about the availability of funding.	The government's commitment to the Scheme is set out in section 3 of the Funding Statement [REP2-005]. Furthermore, in relation to the point, at the recent hearing of the Public Accounts Committee on 5 June 2019 into the A303 Stonehenge Scheme, the Permanent Secretary of the Department for Transport stated: *"……. this scheme and the Lower Thames crossing were originally planned to be funded under the PF2 programme. The Treasury have now cancelled that private finance programme. However, as the Treasury have made clear, and as we have made clear, we and the Treasury—the Government—absolutely remain committed to both this scheme and the Lower Thames crossing. The funding will need to be resolved in the spending review coming up. I think it is fair to say that we will make a strong case for these schemes to be funded in addition to the RIS 2 envelope but, clearly, that will be ultimately a matter for determination in the spending review."*

11.3	Comments on groundwater additional submissions (AS-014 to AS-019)	
	Matter Raised	**Highways England's Response**
11.3.1	Further details of the Chalk bedrock strength, degree of fracturing, high permeability and rapidity of disintegration, after recovery of cores from a number of boreholes (especially in the phosphatic chalk successions - see Appendix 1) demonstrate that the use of a closed, bentonite- based slurry full-face tunnelling machine (TBM) will be essential, possibly backed up by grout injection from additional boreholes drilled from surface. The principles of such operations, together with details of typical grout additives and the extent of invasion of grout and component additives into surrounding strata can be seen in Appendix 2 (Reeves, Sims and Cripps, 2006: *Clay Materials used in Construction*: Chapter 12 – "Specialised Applications"). Drilling techniques, using the triple-tubed wireline core drilling methods are also discussed. Core drilling methods, developed in 1976 by Soil Mechanics Ltd. for Severn Trent Water Authority's "Nitrates in Groundwater" research project (Lucas and Reeves 1980), have produced the best possible undisturbed and uncontaminated rock core recovery. With particular reference to rock core drilling methods, Rock Quality Designation (RQD) values, and the integrity of bedrock at Stonehenge (in both 2002/4 and the latest drilling campaign- from 2016 to 2018), as seen in recovered cores (see Appendix 1), the highly fractured nature and poor quality of Chalk bedrock in large sections of the proposed tunnel line can be easily demonstrated, especially if earlier "Off Line" site investigation information is included in a 3 dimensional model of the Stonehenge area.	See response detailed in hearing summary of agenda item 5 of ISH4 regarding matters relating to flood risk, groundwater protection, geology, land contamination, waste and materials management, submitted at Deadline 4.

11.3.2	Reports AS-016, 017, 018 and 019 are, as they currently stand in the Examination document database, incomplete, incorrect in many basic elements, and are far from being any kind of comprehensive and authoritative documentation on groundwater conditions in the Stonehenge area. The basic data behind all these reports is still not publicly available, nor are included, despite being referenced, in these reports. These missing data are the original site investigation reports relating to much of the reported 2018 site investigation work (specifically, borehole record data on drilling, logging and testing, groundwater information plus the geophysical logging of these 2018 boreholes). It is therefore impossible to consider and critically assess much of the observations, conclusions and interpretations in these documents. Therefore, the validity of the Highways England/Environment Agency "Statement of Common Ground" (specifically groundwater related issues) published in the Examination documentation listing on May 7th 2019, can be called into question. Indeed the 2018 site investigation reports are not included anywhere by Highways England, previous work is incorrectly referenced and attributed, significant appendices are missing (notably from report TR010025-000571) and therefore little independent assessment can be made of any of these reports, their interpretations and conclusions.	All available site investigation data and reports have been reviewed to develop a conceptual understanding of the Chalk aquifer in the area. The statement of common ground was arrived at only after satisfying the Environment Agency that the groundwater risk assessment appropriately represented the Chalk aquifer and the potential impact from the tunnel. Reports AS-016, 017, 018 and 019 reflect the comments by statutory consultees in requesting that confirmatory testing of the groundwater model, and that as the confirmatory data became available this was compared with the model assumptions to ensure the groundwater risk assessment remained valid. Additional model runs were conducted to test assumptions and confirmatory data.
11.3.3	It is now evident that poor ground conditions are more extensive, especially where the Phosphatic Chalk is encountered. Rock Quality Designation (RQD) values of less than 20%, and quite commonly less than 10% have been observed and recorded on borehole logs during both drilling campaigns. From examining the records of Borehole R501, drilled near Chainage 8700 near the centre line of the proposed tunnel in February 2017…. remarkable core degradation demonstrates the high degree of weakness in some of the Chalk bedrock along the proposed tunnel line, and	We recognised that a tunnel has the potential to impede groundwater flow and advised that a groundwater model would be required to assess the potential impacts. All available site investigation data and reports have been reviewed to develop a conceptual understanding of the Chalk aquifer in the area. The groundwater model was adapted in consultation with the Environment Agency and Wiltshire Council, who had an experienced groundwater modelling consultant to review the approach. The modelling has used conservative assumptions and found no significant risk of groundwater flooding or derogation of water supplies, or impact on river flows.

	defines the tunnelling method that will, of necessity, have to be deployed. This is with the use of a closed, full face, slurry shield TBM using a bentonite (plus lubricating additives) -based formation supporting grout system. In constructing a 13m diameter pair of twin tunnels, across a 3km stretch of Chalk aquifer, at right angles across the mainly southerly flow pathways of current groundwater movement, considerable disruption of the natural movement of groundwater is to be expected. What will be created, if such construction goes ahead, is a massive groundwater cut-off, or "groundwater dam", that will cause the current groundwater flow patterns (generally southwards towards the River Avon) to be profoundly affected. If grout/slurry take-up calculations are made, it can be argued that possibly up to 50 metres of depth, along the whole 3 kilometre run of the proposed tunnel, from west to east portal could be affected by the creation of a low permeability groundwater diversion feature. Such conditions are likely to affect existing vulnerable groundwater abstractions, as well as local and regional groundwater resources and groundwater quality, permanently. The modern approach to assessing such variable geotechnical (and hydrogeological) features over such a large volume of rock is to use a 3-D Ground Model… Such approaches are far more powerful and useful than any number of 2-D sections.	See response detailed in agenda item 5 of the written oral submission for ISH4 regarding matters relating to flood risk, groundwater protection, geology, land contamination, waste and materials management, submitted at Deadline 4.
11.3.4	In running a 13m diameter closed-face TBM across the Stonehenge section (twice; west to east, then the return, east to west tunnel bores) it is possible that vibration from such activities will be generated upwards towards the ground surface. No specialised engineering geophysical combined surveys and interpretive techniques are understood to have been applied along the proposed tunnel line to investigate features or void spaces, either shallow or targeted to the proposed tunnel depth.	See response detailed in agenda item 5 of the written oral submission for ISH4 regarding matters relating to flood risk, groundwater protection, geology, land contamination, waste and materials management, submitted at Deadline 4.

	11.3.5 A thorough investigation, using modern digital combined surface geophysical survey techniques, with 3-D modelling of the combined output (from, inter-alia, Ground Probing Radar, Engineering Seismic Surveys, Electrical Resistivity and E/M, gravity and magnetics surveys) would be a modern, informed approach on such an area of ground, prior to any major project which would involve ground disturbance and especially tunnelling. It is suggested that, in view of the extreme archaeological sensitivity of the Stonehenge landscape, such a survey be considered essential prior to any decision on the DCO application.	
11.4	**Oral Submission**	
	Matter Raised	**Highways England's Response**
11.4.1	Highways England have responded to Stonehenge Alliance's oral submission in REP3-012, section 5.4.	

12 Environment Agency (REP3-051)

12.1	Comments on Written Questions responses	
	Matter Raised	**Highways England's Response**
12.1.1	**DCO.1.16 - Article 3 Disapplication of legislative provisions** We note the response from the Applicant regarding this question. We confirm that we are still in discussions with the Applicant regarding the provisions of Article 3.	Since Deadline 3, the Applicant and the Environment Agency has agreed its protective provisions and agreed the disapplications in article 3 for which the Environment Agency is the consenting authority.
12.1.2	**1.1.1.1 DCO.1.23 - Article 7 Limits of Deviation** It is noted that Limits of Deviation to the vertical and lateral alignment of the tunnel are to be set by the DCO to allow for changes in the currently proposed design during detailed design by the contractor. The Bored Tunnel Limits of Deviation Plan (TR010025-2.16 Rev P02) submitted with the DCO application indicates an upper limit for the crown of the tunnel at 70 mAOD at the lowest point of the tunnel - beneath Stonehenge Bottom - and no lower limit to its vertical alignment. The groundwater risk assessment to date (most recently updated in *Implications of 2018 Ground Investigations to the Groundwater Risk Assessment, P04. AECOM, Mace, WSP, April 2019*) has assessed the impacts of an alignment where the crown, at its lowest point – beneath Stonehenge Bottom – is 55 mAOD. This assessment places the tunnel beneath the expected elevation of the Whitway Rock which acts as a preferential flow horizon (although the presence of these and exact location has not been confirmed to date). Due to the risk of the tunnel impeding flow along this horizon should its alignment, design or construction methodology change, it is essential that any changes to the detailed design are adequately risk assessed.	The Applicant notes that a response to the theoretical presence of the Whitway Rock has been provided to the Environment Agency in the response to Written Representation 23.2.2-23.2.6 issued at deadline 3 [REP3-013].

12.1.3	**1.1.2 DCO.1.40 – Maintenance of drainage works** This is to be agreed between Wiltshire Council and Highways England, however, we would recommend any component built to ensure flood risk safety of the development for its lifetime to be maintained by the applicant. We understand that a Handover Environment Management Plan (HEMP) is to be produced and would include maintenance, which we would support. We would wish to be consulted on the HEMP, along with the Local Drainage Authority. We consider the definition and requirement for a HEMP should be more clearly stated in the DCO.	The Applicant confirms that the updated OEMP submitted at Deadline 3 [REP3-006], reference [MW-G11], requires consultation with the Environment Agency on matters related to its functions contained in the HEMP.
12.1.4	**1.1.2.1 DCO.1.70 (and DCO.1.85)** These state that item MW-G5 of the OEMP requires that the Environment Agency is *consulted* during preparation of the CEMP. We would request that the wording is amended to require our *approval* or "agreed in writing with the Environment Agency" to ensure that risks to the environment are adequately managed. It would seem that as it stands, the only approval required is that of the applicant. We do not consider that this provides assurance that the CEMP will be adequately scrutinised prior to approval.	The Applicant considers it to be appropriate for the CEMPs to be approved by the authority in consultation with the bodies specified, including the Environment Agency, as set out in the OEMP. The Applicant's reasons for holding this view are set out in summary of oral representations made at ISH1 regarding the DCO, items 3.1 and 4.3.
12.1.5	**1.1.2.2 DCO.1.72 (and DCO.1.85)** We would also request that we are required to approve or "provide written agreement of" not just be consulted on the topic specific management plans referred to in OEMP item MW-G7 that fall within the remit of the Environment Agency.	The Applicant considers it to be appropriate for the CEMPs to be approved by the authority in consultation with the bodies specified, including the Environment Agency, as set out in the OEMP. The Applicant's reasons for holding this view are set out in summary of oral representations made at ISH 1 regarding the DCO, items 3.1 and 4.3.
12.1.6	**DCO.1.83** Relating to the requirement for approval to be sought for changes to the detailed design we note that as it stands, there is no requirement for public consultation if the changes are deemed to "not give rise to any materially new or materially worse adverse environmental effects from those reported in the environmental statement". It is not clear that the Environment Agency would be involved in making the judgement as to	The Applicant does not consider it appropriate to specify that the Environment Agency must be consulted by the Secretary of State when he or she is considering whether to approve a departure from the plans specified in that requirement, which would not give rise to materially new or materially worse adverse environmental effects from those reported in the Environmental Statement. By its nature, any application under this requirement would necessarily be for a minor change.

	the likely degree of impact of any changes. We would therefore suggest the EA should be consulted on any changes to the construction design or methodology and no development should take place until written agreement in writing is provided that all apparent environmental risk have been considered and mitigated.	The Applicant further notes that the robustness of this justification is borne out by the fact that there is no precedent for the Environment Agency to be consulted on this kind of requirement and that there are no particular circumstances in relation to this Scheme that would appear to justify the departure from established precedent. In the event that the limited degree of flexibility afforded by an application under requirement 3 were to be exercised, construction of the Scheme would still be subject to the requirements, in particular requirement 4 which secures compliance with the OEMP under which the Environment Agency is consulted as specified, on matters relating to its functions.
12.1.7	***Fg.1.7*** – 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. 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. We understand that ground investigation and risk assessment of these sites has been or is currently being carried out. We would welcome the opportunity to review the results of these assessments at the earliest opportunity and would remove our request for the additional Requirement in the DCO should we be satisfied that acceptable risk to controlled waters has been demonstrated prior to construction taking place and appropriate methods are in place to investigate and where appropriate remediate any contamination identified during construction.	Further to Highways England's response to the Environment Agency's Written Representation [REP2-094], in paragraph 22.2.19 of the Submission - 8.18 - Comments on Written Representations [REP3-013], further explanation on the ground investigation rationale and progress to date is provided here. The Phase 7 ground investigation is a 2-year ground investigation programme split into two phases (Phase 7A and Phase 7B). The first phase (Phase 7A) is to provide identified supplemental information to inform the main works tender design. . Going forward, it is Highways England's intention to work with tenderers to finalise the ground investigation scope for Phase 7B to support their design whilst also taking onboard the views of stakeholders. The Phase 7A ground investigation is split into two parts; Phase 7Ai and 7Aii. Phase 7Ai commenced on Monday 10th June 2019 and is expected to last approximately 5 to 6 weeks. Phase 7Aii is planned to start after the farmers' harvest around August 2019 but precise commencement dates are still to be confirmed. The Phase 7Ai investigation includes for four boreholes within the former RAF Stonehenge site that is crossed by an approximate 800m length of the proposed Scheme (in tunnel). An additional 12 no. exploratory holes are planned during the Phase 7Aii ground investigation to the west of these boreholes where the proposed Scheme passes directly south of the former RAF Stonehenge site and out of the tunnel through the western tunnel portal. Phase 7Ai also includes for four boreholes in the area of the former RAF Oatlands Hill site, albeit clustered around the proposed Longbarrow Green Bridge No. 3. However, Phase 7Aii includes for wider coverage of this site with an

		additional 7 no. boreholes, 3 no. trial pits and 5 no. windowless sample boreholes. An approved Factual Report is expected at the end of September 2019 for Phase 7Ai.
12.1.8	***Fg.1 document*** - There are many items in the Flood Risk, Groundwater Protection, Geology and Land Contamination (Fg.1) document related to the drainage strategy and seeking greater detail on the proposal submitted with the DCO application. Whilst no significant additional information is provided above that contained in the Environmental Statement Appendix 11.3, we welcome the applicant's general response that "the details of the drainage system will be developed in consultation with the EA". We would however consider it more appropriate for this consultation to be legally secured through naming of the EA in Requirement 10 of the draft DCO rather than under the DMRB guidelines as suggested by the applicant in response to Question Fg.1.39. The DMRB HA103 Clause 4.15 referred to by the applicant only describes consultation with the relevant Environmental Protection Agency in relation to determining the vulnerability of groundwater at the site, not regarding treatment of runoff or quality of discharges. Any such risks and mitigation should therefore be agreed in writing with the EA. The majority of these controls regarding the drainage could be included in the Consolidated Environmental Mitigation Schedule, MW WAT 10 and agreement of a "Groundwater Management Plan" and or similar sections.	The Applicant notes that requirement 10 was amended in revision 1 to the draft development consent order [REP2-003] to require consultation with the Environment Agency prior to the Secretary of State's approval of the written details of the drainage scheme.
12.1.9	**Impact on habitats, Ec.1.21 –** We note the points raised by the Wessex Chalk Stream and Rivers Trust (WCSRT) and the response provided by Highways England. We would support the issues raised by the WCSRT and maintain our comments made in our earlier representations that the scheme should contribute to the delivery of more wetland	See response to items 23.2.39 to 23.2.41 in the Comments on Written Representations [REP3-013].

	habitat enhancements. As part of this we would recommend that a Requirement be included in the DCO for an Environmental Enhancement Plan to be produced. This should identify potential enhancement opportunities and provide a mechanism for relevant parties, including the EA, to agree what could be taken forward and delivered.	
12.2	**Comments on draft development consent order**	
	Matter Raised	**Highways England's Response**
12.2.1	**Article 3 - Disapplication of legislative provisions –** We note the removal of Section 24 (restrictions on abstraction) of the Water Resources Act 1991, which we support. Consequently any abstraction (including dewatering), unless covered by exemption will require an abstraction licence.	Noted.
12.2.2	**1.1.2.3 Article 13 - Discharge of water** 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: "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. "	The Applicant notes the Environment Agency's concerns which the Applicant considers to be unwarranted in the context of article 13. The purpose and effect of article 13 is to establish a procedure whereby the Applicant can obtain the necessary proprietary right to discharge water, either to public sewers or drains, or watercourses. It does not authorise discharges to the ground. It imposes duties on the Applicant to obtain the consent of the appropriate owner before doing so (who may impose reasonable conditions) and to ensure that the water so discharged is visibly clear from "gravel, soil or other solid substance, oil or matter in suspension" to ensure that the Applicant is prevented from adversely affecting the functioning of the drainage system to which it connects. However, the article is not concerned with pollution control, as is expressly acknowledged in paragraph (6), which makes clear that nothing in this article overrides the requirement to obtain an environmental permit. Any discharge to a watercourse that constitutes a water discharge activity would be subject to the regulation of the Environment Agency under the Environmental

	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.	Permitting (England and Wales) Regulations 2016. The Applicant further notes that the drafting of this article in the form contained in the draft development consent order is very well precedented, having been included in the majority of development consent orders made to date and has been subject to only modest changes (principally the change in paragraph (6) to reflect changes in the regulation of the discharges of water and in paragraph 7(a) to reflect the change in name of the Homes and Community Agency). As such, the Applicant considers that the change requested is unnecessary as it would duplicate regulation.
12.2.3	**Requirement 3 Preparation of detailed design, etc –** As discussed in our comments to question DCO.1.83 above, it is not clear that the Environment Agency would be involved in making the judgement as to the likely degree of impact of any changes to the detailed design. We would therefore suggest the EA should be consulted on any changes to the construction design or methodology and no development should take place until written agreement is provided that all apparent environmental risk have been considered and mitigated.	Please see above in respect of the Environment Agency's comments on Written Question DCO.1.83.
12.2.4	**Requirement 10 Drainage -** We welcome the addition of text requiring consultation and written agreement with the Environment Agency during detailed design of the drainage system. **Schedule 11 Protective Provisions -** We are still in discussion with the Applicant with regard to Protective Provisions.	Since Deadline 3, the Applicant and the Environment Agency have agreed its protective provisions and agreed the disapplications in article 3 for which the Environment Agency is the consenting authority. The agreed form of protective provisions will be included in the revision 3 of the draft development consent order to be submitted at Deadline 4.
12.2.5	**Additional Requirements recommended to be included in the DCO** **Environmental Enhancement Plan –** we wish to reiterate the comments made in our earlier representations that the scheme should contribute to the delivery of more wetland habitat enhancements. As part of this we would recommend that a Requirement be included in the DCO for an Environmental Enhancement Plan to be produced. This should identify potential enhancement opportunities and provide a mechanism	Please see the Applicant's responses to the Environment Agency's written representation (paragraphs 23.2.2.42 to 23.2.47 [REP3-013] and the summary of oral representations made at ISH1 regarding the DCO, items 4.11-4.12).

	for relevant parties, including the EA, to agree what could be taken forward and delivered.	
12.2.6	**Additional Requirements recommended to be included in the DCO** **CEMP and HEMP –** we also wish to reiterate our earlier comments requesting specific Requirements to be included in the DCO relating to the production of CEMP and HEMP. The EA would wish to be consulted on the production of these documents at the earliest stages and throughout the process.	The Applicant has amended the OEMP at deadline 3 [REP3-006] to include further consultation with the Environment Agency, as is explained in the Applicant's response to the Environment Agency's written representation (see paragraphs 23.1.3 to 23.1.4 [REP3-013]).
12.3	**Comments on ES Appendix 11.3: Road Drainage Strategy**	
	Matter Raised	**Highways England's Response**
12.3.1	**1.1.2.4 Groundwater and contaminated land** There are no significant changes that address comments we made previously on the version dated October 2018 and submitted with the DCO application. These related to the capacity to store contaminated runoff in the event of spillages and the efficacy of the proposed infiltration basin lining material at treating contamination and the maintenance any such material will require. For example, the EA recommended the penstock discussed in 3.2.5 & 5.2.6, should be down stream of basin, to maximise the storage of contaminants in the event of an incident occurring and prior to them being discharged to the soakaway. The basin would then discharge to a soakaway system with proprietary treatment in place. It is likely with the current design that any contaminants from an incident will have drained through the pipework and discharged to the containment basin, by the time any penstocks are closed by	Within the Statement of Common Ground (SoCG) with The Environment Agency [REP2-012], the summary of the key matters agreed noted that: • *The level of detail provide in the ES is sufficient for the DCO application stage.* The design of the proposed infiltration basin including the lining material and defining the maintenance regime are matters which will be addressed at the detailed design stage. In addition, point 3.13 stated that: • *Road drainage Highway run-off from accidental spillages has the potential to damage receiving watercourse through discharge of liquid contaminants. It is agreed that through the drainage strategy submitted with the application, the Scheme once constructed has the potential to provide significant betterment in terms of water quality and spillage control when compared to the existing situation. The road drainage for the scheme will be designed, constructed and maintained to DMRB*

	automated incident control system. In our Statement of Common Ground (SoCG) the Applicant has agreed to consult the EA on the detailed design of the drainage system and recognised that the sensitive nature of the environment may require pollution control and mitigation measures in excess of the minimum stated in DMRB HD45. We welcome the modification to Requirement 10 of the Draft DCO that requires consultation with the EA over the detailed drainage scheme design to ensure that our concerns have been addressed. However, we would also wish to ensure that as part of this Requirement our agreement on the details of the drainage system is obtained prior to the commencement of the development.	*standards. The EA will be consulted during the detailed design in line with HA103 Clause 4.15.* The inclusion and location of penstocks in advance of the Drainage Treatment Areas (DTA) provides the opportunity for the containment of material from spillage incidents on the highway within the drainage network in advance of the DTA. The penstocks being located within the highway verge with have location signage, ensuring ease of access and operation. The DTA's are an infiltration system which have the capacity to cater for a +40% global warming allowance whilst retaining a 250mm freeboard, therefore, do not have an outfall. Also see the Applicant's response to Written Question Fg.1.34 [REP2-031]. The draft development consent order has been modified to ensure the inclusion of the EA within the consultation for the development of the detailed highway drainage design. The EA will be consulted but their approval of the detailed design is **not** required. The approval of the detailed design will be by the Secretary of State.
12.3.2	**1.1.2.5 Flood Risk** Section 3.2.4 of the Drainage Strategy states that the road drainage will be designed to the 1 in 100 plus 30% allowance for Climate Change. Due to the major development and high flood risk area we would expect the road drainage to be designed to the 1 in 100 plus 40% allowance. If the 30% allowance is to be used, we strongly recommend that the applicant demonstrates what justification they have of not using the upper allowances and what mitigation they will be completing due to the consequences of having very little freeboard when testing the 40% allowance on the road drainage structures.	The Applicant's position was outlined in our responses at Deadline 3, para 22.5.21 and a progress update provided in ISH4, agenda item 6.4 that discussions with Wiltshire Council and the Environment Agency are ongoing regarding climate change allowances in relation to the road drainage strategy.

12.4	Comments on Consolidated Environmental Mitigation Schedule	
	Matter Raised	**Highways England's Response**
12.4.1	**1.1.2.6 General comment** We welcome the consolidation of all mitigation measures including those from the OEMP into a single, trackable and updateable document. We note that it is envisaged that both the OEMP and this document will be updated to reflect any future changes to required mitigation. There does not however appear to be any mechanism by which measures set out in the CEMP are legally binding and it remains that the OEMP is the means by which environmental mitigation is secured.	Item MW-G5 of the OEMP [REP3-006] states that 'the main works contractor shall prepare a CEMP, in accordance with this OEMP'. The OEMP is secured via Schedule 2 Paragraph 4 of the draft development consent order [REP3-002] which is the legally binding mechanism that ensures the measures within the OEMP are incorporated into the CEMP. As such, deviation from the measures outlined within the OEMP would constitute a breach of the DCO Requirements. See the Applicant's response to the Environment Agency's written representation [REP3-013], paragraphs 23.1.3 to 23.1.4 for further details.
12.4.2	**MW-WAT2 Water Management Plan –** We welcome that a Water Management Plan will be produced. The Consolidated Environmental Mitigation Schedule does not mention whether the Environment Agency would be consulted on the Plan. We would request being consulted on the production of the Water Management Plan at the earliest stage.	Item MW-G7 of the OEMP [REP3-006] required consultation with the Environment Agency during the preparation of Management Plans relevant to their functions (which includes the Water Management Plan described in item MW-WAT2). To strengthen this consultation obligation, an amendment will be made to item MW-WAT2 of the revised OEMP submitted at Deadline 4 to include: *'The main works contractor shall consult with the Environment Agency during the development of the WMP'.* The OEMP is secured via Schedule 2 paragraph 4 of the draft development consent order [REP3-002].
12.4.3	**MW-WAT10, MW-WAT11 and MW-WAT15 -** The contractor should agree the groundwater monitoring and mitigation plan with the Environment Agency which should include the locations, method and quality determinants that will be monitored. Thresholds (for both groundwater level and quality) shall be agreed that might indicate some environmental impact and these shall be set at such a level as to provide sufficient time to put in place measures contained in an agreed action	Item MW-G7 of the OEMP [REP3-006] required consultation with the Environment Agency during the preparation of Management Plans relevant to their functions (which includes the Groundwater Management Plan (GMP) described in item MW-WAT10). To strengthen this consultation obligation, an amendment will be made to item MW-WAT10 of the revised OEMP submitted at Deadline 4 to include: '*The main works contractor shall consult with the Environment Agency during the development of the GMP'.*

	plan to mitigate the risk to the environment and/or protected rights of water users.	Items MW-WAT11 (Management of impact on abstraction boreholes) and MW-WAT15 (Monitoring of water resources) of the OEMP outline measures to be developed in relation to these matters to then be included within the GMP. The Environment Agency will be consulted on these measures during the development of the GMP. The OEMP is secured via Schedule 2 paragraph 4 of the draft development consent order [REP3-002].
12.4.4	**MS-SG1, MS-SG2, MS-RD1 in Table 1.4** (measures previously included in the Environmental Mitigation Schedule) refer to aspects of the drainage scheme that will ensure carriageway runoff will be treated prior to discharge to surface or ground water. The level of treatment however is not stated and we recommend this be included as part of the DCO application information.	ES Appendix 11.3 Road Drainage Strategy [REP2-009] outlines the approach to road drainage. This includes measures such as proprietary treatment systems within drainage basins to absorb contaminates before the runoff is discharged via infiltration to ground. The road drainage system will be designed by the appointed contractor during the detailed design stage. The level of treatment within the road drainage system will meet DMRB standards, as outlined within the Road Drainage Strategy [REP-009]. The development of a drainage system, based on the mitigation measures included within the ES is secured via Schedule 2 Paragraph 10 of the draft development consent order [REP3-002], which requires the Secretary of State's approval of the written details of the drainage system, following consultation with the Environment Agency and Wiltshire Council on matters relating to its land drainage functions, prior to commencement .
12.4.5	**MS-RD1** further states that discharges will be outside Source Protection Zones for licensed abstractions. Unlicensed abstractions used to supply potable water also have default 50m radius Source Protection Zones around them; these should be afforded the same protection as licensed abstractions and surface and groundwater quality should be protected inside and outside of the curtilage of the road. We would recommend that any environmental mitigation should be agreed in writing with EA.	Item MW-WAT11 of the OEMP [REP3-006] outlines measures relating to management of impacts on abstraction borehole. These measures are not limited to licensed abstractors only. As detailed within item MW-WAT11, the main works contractor will consult with abstractors / licence holders and the Environment Agency on provision of mitigation measures to manage the risk of groundwater pollution at abstraction points. The OEMP is secured via Schedule 2 paragraph 4 of the draft development order [REP3-002].
12.4.6	**Invasive non-native species –** the scheme should commit to providing mitigation to include the removal and/or future management of invasive non-native species arising at the construction stage. We recommend this is included in the mitigation schedule.	Items PW-BIO1, MW-BIO5 and MW-BIO6 of the OEMP [REP-006] outline measures to promote biosecurity and minimise the risk that invasive non-native species and diseases are spread as a consequence of the project. Measures within the OEMP are secured via Schedule 2 paragraph 4 of the draft development consent order [REP3-002]. Additionally, all contractors are legally obliged to manage and prevent the spread of invasive non-native species.

13 Council for British Archaeology (REP3-049 and 050)

13.1	Comments on Written Question Responses	
	Matter Raised	**Highways England's Response**
13.1.1	**CH.1.1:** As noted in our comments on fieldwork, major uncertainties arise from the combined limitations arising from technical sampling issues; spatial limitations in application of fieldwork other than geophysics; the failure to use sampling principles to forecast the scale of archaeology likely to be lost, damaged or buried; the unduly low significance attached to small but potentially numerous features highly relevant to OUV; and the technical challenges in achieving *in situ* preservation. As we have previously noted, the ES and HIA did NOT report the numerous research issues that have been identified by the fieldwork that was done, and has tended to belittle key aspects of WHS OUV without properly understanding the full likely implications of the scheme. It also does not help that the results of previous work relied upon are not provided in comparable detail. Highways England's reliance on the ES and HIA as providing robust assessments that do not need modification in the light of the fieldwork, is misplaced and does not provide the full picture, especially when considered against relevant policy provisions (see REP2-075 CBA Appendix D).	See the Applicant's written summary of oral submissions made at ISH2 (submitted at Deadline 4) made in relation to agenda item 3 regarding policy and guidance, agenda items 4(i) and 4(iii) regarding the World Heritage Site in context, agenda items 5(i) and (ii) in relation to limitations of the assessment undertaken and perceived failures of the archaeological investigation methods used, the adequacies of content, analyses, assessments and conclusions of the Heritage Impact Assessment, and information suggested as missing from the Heritage Impact Assessment. See Applicant's written summary of oral submissions made in relation to agenda item 7 of ISH2 regarding the Detailed Archaeological Mitigation Strategy (DAMS), submitted at Deadline 4. The points raised by CBA have been addressed previously in response to CBA's written representation. Please refer to Section 21.4 of Highways England's Comments on Written Representations [REP3-013] which describes the full and comprehensive programme of archaeological evaluation surveys that were undertaken to inform the ES and HIA (para. 21.4.2), appropriate sampling (paras. 21.4.7; 21.4.30; 21.4.67), serious consideration of previous discoveries (para. 21.4.3), exhaustive identification of Scheme impacts (para. 21.4.4), potentially significant small features (paras. 21.4.67-21.4.74) and full appreciation and understanding of the importance of the WHS and its OUV (para. 21.4.5). With reference to modifying the Environmental Statement in the light of the fieldwork, please refer to Section 21.1 of Highways England's Comments on Written Representations [REP3-013], paragraphs 22.1.19 to 22.1.22. Regarding preservation in situ, please see response to item 13.1.2 below. Regarding the research issues of the fieldwork undertaken, these are identified in the draft DAMS submitted at Deadline 4.

13.1.2	**CH.1.3:** The response provided only covers assessment/monitoring processes yet to be decided in detail. Para 6 still provides no reference to relevant technical literature or past case studies of archaeological sites subject to vibration, crushing, compression and distortion. No consideration is given to issues related to soil restoration when temporary works areas are returned to agriculture and how (if at all possible) that would be secured with farmers (see below).	**Preservation in situ** See agenda item 7 of the Applicant's written summary of oral submission from ISH2 regarding the Detailed Archaeological Mitigation Strategy (DAMS) and agenda item 6 (iii) of ISH5 regarding vibration and settlement impacts on heritage assets and appropriate monitoring and mitigation measures which were discussed. Please also see the updated Outline Environment Management Plan (OEMP) [REP3-006] and draft DAMS submitted at Deadline 4. The protection of archaeological remains in situ, where practicable, is a principal objective of the DAMS. It is considered that unacceptable impacts would be avoided by the implementation of the measures in the draft Detailed Archaeological Mitigation Strategy (DAMS) [REP2-038]. Development of the DAMS will address the technical requirements to achieve the desired mitigation for the measures mentioned in the written submission. Please refer to Section 21.4 of Highways England's Comments on Written Representations [REP3-013] which sets out the approach to developing the draft DAMS (paras. 21.4.2–12, 21.4.2–13 and 21.4.2–15). As stated in Highways England's Comments on Written Representations [REP3-013, paras. 21.4.2–15], "Development of the DAMS will consider relevant guidance published by Historic England in order to further develop the approach and to define areas where this can be achieved, in consultation with HMAG and (where appropriate) WCAS." As noted in Highways England's response to Relevant Representations [AS-026, pages 4–12], "The detail, development and implementation of the design of the Scheme and its mitigation measures will be secured by requirements within the DCO, which will be binding on Highways England and any of its contractors in the construction, operation and maintenance of the scheme. Highways England will separately ensure compliance with relevant requirements via contractual obligations on main and sub-contractors, as described in paragraphs 2.3.61 and 2.3.62 of the Environmental Statement (ES) [APP-040]."

		Regarding technical literature and case studies, the draft DAMS submitted at Deadline 4 (paragraph 4.3.12) includes reference to the use of the Historic England guidance 'Preserving Archaeological Remains. Decision-taking for Sites under Development. (Historic England, 2016c), which includes references to relevant technical literature and case studies. The HMP will be developed with reference to this, as well as other relevant technical literature and case studies, in consultation with HMAG, WCAS and Historic England. **Soil restoration, including when temporary works areas are returned to agriculture and how (if at all possible) that would be secured with farmers** See the Applicant's written summary of oral submissions in relation to agenda item 7 of ISH2 regarding the Detailed Archaeological Mitigation Strategy (DAMS), submitted at Deadline 4. As explained at the Issue Specific Hearing, a soil management strategy is secured in ES Appendix 2.2 – Outline Environmental Management Plan (OEMP) [REP3-006, Table 3.2b REAC tables for the main works, item MW-GEO3], and that the soil management strategy would take cognisance of any archaeological considerations, as required by the DAMS. The soil management strategy will identify the nature and types of soil that will be affected and the methods that will be employed for stripping soil and the restoration of agricultural land. Item reference MW-GEO7 then sets out what the main works contractor must develop to form part of the soil management strategy. This includes: "*Soils Handling Strategy, with reference to BS3882: 2015 Specification for Topsoil and the Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Site. This shall* ***incorporate the soils handling measures outlined within the DAMS****, identify locations where archaeological in-situ preservation is required and consider areas to be returned to agricultural use* […]" (words in bold have been added to the OEMP for Deadline 4, to spell out for the avoidance of doubt the ensure compatibility between the OEMP and DAMS). This is further bolstered by the new paragraph 5.2.11 in the updated DAMS submitted at Deadline 4. See the Applicant's written summary of oral submissions in relation to agenda item 3.14 of ISH1 regarding the draft development consent order Article 29 – Temporary use of land for constructing the development, submitted at Deadline 4. Article 29 of the draft development consent order relates to the temporary use of land for constructing the development and includes, at Article 29(4) obligations on

		the Applicant to restore the land after use. The OEMP includes provisions to manage the restoration of agricultural land at MW-COM4, MW-COM5 and MW-COM8. Please also refer to Section 21.4 of Highways England's Comments on Written Representations [REP3-013, paras. 21.4.2–14], which notes that "Land which is currently in agricultural use, and which is used for temporary construction compounds by exercise of the powers of temporary possession in the DCO, will be returned to agriculture; the Applicant will have no control, over the use of such land thereafter and it is not therefore possible to restrict normal agricultural practices in these areas."
13.1.3	**CH.1.5:** The response provided is unwarrantedly dismissive of what is a key research issue that is extremely relevant to the OUV of the WHS - and to the proposed scheme given the actual discovery of human remains in graves NOT marked by major monuments. Such unmarked graves dating to different periods in around the WHS are key to understanding the demographic dynamics and esteem accorded to different groups, and this can only be properly understood in the context of domestic activity in amongst adjacent to or more distant from the key monuments as well as both monumentalised and non-monumental burials. Far from *'not having a bearing on the outcome of the examination'* this is HIGHLY relevant in terms of the research issues that the evaluation reports have highlighted as relevant to the aspects of OUV that would be lost, as summarised in our comments on the fieldwork.	See the Applicant's written summary of oral submissions in relation to agenda item 5(i) of ISH2 regarding the adequacies of content, analyses, assessments and conclusions of the Heritage Impact Assessment, submitted at Deadline 4. See the Applicant's written summary of oral submissions in relation to agenda item 7 of ISH2 regarding the Detailed Archaeological Mitigation Strategy (DAMS), submitted at Deadline 4. Highways England maintains that, as stated in the response to Written Question CH.1.5 [REP2-025], it would be "highly conjectural to try to tie the different phases in the construction and use of Stonehenge and its monuments to a particular group of immigrants / indigenous people on present evidence. Highways England therefore cautions against entering into this academic debate at this time with regard to this examination as it does not have a bearing on the outcome of the examination." The Scheme takes into account the emerging results of academic research programmes undertaken over the last decade (see Highways England's Comments on Written Representations [REP3-013, paras. 21.4.7; 21.4.27]. The significance of what has already been found is considered in the HIA [APP-195] and ES baseline [APP-044, paras. 6.6.13 – 6.6.52] [REP3-013, para. 21.4.28]. The Applicant considers that the HIA has been carried out accurately and with a full appreciation and understanding of the importance of the WHS and its OUV, having appropriate regard to the previous archaeological work in the WHS [REP3-013, para. 21.4.29] and the findings of the archaeological evaluations undertaken to support the Scheme.

		In particular, both the ES and HIA were prepared with regard to published research agendas, strategies and frameworks [APP-044, para. 6.3.6 & 6.6.14; APP-195, paras. 5.2.1; 5.2.3; 5.7.2f; 5.10.18; 6.2.1; 12.3.10]. ES Chapter 6, Cultural Heritage, notes that "The scope of the field work programme within the WHS has been developed in consultation with HMAG and the Scientific Committee to reflect approaches employed by current academic research projects in the WHS. Outside the WHS, a similarly detailed approach combining detailed geophysical survey, sampling of artefacts in the plough zone and targeted trial trenching has been employed to ensure a consistent approach across the Scheme" [APP-044, para. 6.6.13]. The draft DAMS submitted at Deadline 2 [REP2-038] sets out the structured, iterative detailed archaeological mitigation strategy. The DAMS is rooted in a heritage research-led framework [REP2-038, section 2, Archaeological Research Strategy and Principles for Archaeological Mitigation] and considers the results and significance of the evaluations and proposes protection of remains in situ where practicable and detailed archaeological excavation and recording where preservation of remains is not possible. The draft DAMS [REP2-038] includes a consideration of research themes and questions identified in the Stonehenge and Avebury Archaeological Research Framework (SAARF) in the section on [section 2.4, Archaeological Research Strategy], and contains a Strategy for the Recovery of Human Remains [section 2.4, paras. 5.3.61–72]. Highways England continues to engage with HMAG members to agree mitigation requirements that are reasonable and proportionate to the significance of the heritage assets likely to be encountered, based on the results of the comprehensive archaeological evaluation programme that has been completed. The final DAMS will be a certified document, implementation of which will be secured as mentioned above by paragraph 5 of Schedule 2 to the draft development consent order [REP2-003].
13.1.4	**CH.1.6:** The response provided only covers the Oatlands Hill 'C-shaped enclosure' raising a number of issues. The statement, *the enclosure does not contribute to the OUV of the WHS, being of Late Bronze Age date* reflects a fundamental problem that the ES and HIA reflect which is a far too narrow view of what contributes to the OUV of the WHS. This	Highways England note the response of Henry Owen John, Historic England, at the Issue Specific Hearing as to whether the Blick Mead Mesolithic site should be considered of Outstanding Universal Value or not in ISH2 agenda items 4 (i, ii and iii). In Historic England's view, Blick Mead plays no part in the OUV, although regard still has to be had to Blick Mead in order to ensure heritage is properly safeguarded and managed. Mr Owen John explained that this is the context in

	does NOT reflect what the adopted Management Plan says about the WHS being important for prehistory generally (not just Neolithic and earlier Bronze Age ceremonial and funerary monuments); nor the importance of what came after or what went before the main period of constructing monuments. While later written evidence of subsequent values is explicitly cited as part of the area's OUV the late prehistoric and Roman periods for which we are reliant on archaeological evidence is also part of this issue. The response also fails to reflect the significant discoveries made in the other evaluation works in the area of the proposed new junction and its slip roads, though as we noted in our comments, several key research issues relevant to OUV arise in relation to remains that would be lost. While not directly raised in terms of specifically identifiable remains that might be physically disturbed, the small hengiform enclosure and possible another ring ditch further to the SW on the line of the Winterbourne Stoke Barrow Group would appear to be part of this linear ridge top cemetery and despite the results of the geophysical surveys there is potential for other (perhaps unmarked) burials or other features related to this complex. Even if not, the integrity of the linear cemetery would become even more fragmented including earthworks changing the topography.	which Highways England has properly undertaken its assessment of Blick Mead as well as of the OUV on the whole of the WHS. Highways England also note the response of Melanie Pomeroy-Kellinger, Wiltshire Council County Archaeologist, in ISH2 agenda item 6 (ii) regarding whether the C-shaped enclosure should be considered of Outstanding Universal Value. Wiltshire Council's position was that the C-shaped Enclosure was not considered to have attributes of OUV as it is late Bronze Age in date. Ms Pomeroy-Kellinger noted that this has been considered in detail. **Time periods and OUV** See the Applicant's written summary of oral submissions in relation to agenda item 4(ii) of ISH2 regarding the relevance of Mesolithic as well as Neolithic and Bronze Age matters submitted at Deadline 4. Please refer also to paragraphs 12.3.103–105 of Highways England's Comments on Written Representations [REP3-013] which addresses proposals to revise the WHS inscription to include the Mesolithic period mooted by the Stonehenge Alliance [REP2-136]. Highways England maintains its position that the C-shaped enclosure does not contribute to the OUV of the WHS, and notes that this view was supported at the issue specific hearing by Wiltshire Council and notes above that Historic England concur that Highways England has properly undertaken its HIA with regards to the OUV on the whole of the WHS. The WHS Management Plan (Simmonds & Thomas 2015; p. 23, http://www.stonehengeandaveburywhs.org/assets/Stonehenge-and-Avebury-WHS-Management-Plan-2015.pdf) notes (emphasis added) that "In addition to the Outstanding Universal Value, which gives the Site its international significance, there are **other national and local values which have to be taken into account in management decisions**. **These are set out in the two management plans for Stonehenge and Avebury. They include: the archaeological and historical significance of other periods from the Mesolithic onwards**, continually augmented by new discoveries, social value and local needs, educational resource, ecological value, tourism, agriculture and other economic activities. The movable artefacts from the World Heritage Site are

		important in developing our understanding of this prehistoric culture. Many of them are held at the nearby Wiltshire Heritage Museum in Devizes, the Salisbury and South Wiltshire Museum, Salisbury and the Alexander Keiller Museum at Avebury itself. At Avebury, it is important to take into consideration the needs of the local community living within and adjacent to the Henge, which creates particular issues." Highways England would highlight, based on the Management Plan, that "the archaeological and historical significance of other periods from the Mesolithic onwards" do not contribute to the Outstanding Universal Value, which gives the Site its international significance, but comprise "other national and local values which have to be taken into account in management decisions". The Statement of Outstanding Universal Value (SoOUV) was prepared by the State Party, reviewed by Advisory Bodies and approved by the World Heritage Committee in 2013. A retrospective SoOUV was adopted by the World Heritage Committee in 2013 (UNESCO 2013, 291– 94). The SoOUV forms the focus of all future protection and management decisions and clearly sets out 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. The background to the development of the SoOUV is set out in Environmental Statement Appendix 6.1 - Heritage Impact Assessment [APP-195, paras. 6.6.1–13]. The SoOUV clearly sets out that those sites that contribute to OUV relate to monuments that were built c. 3700 to 1600 BC, i.e. the Early Neolithic to the Early Bronze Age (inclusive), and not other periods [APP-195, para. 5.10.29]. Although assets that do not convey the Attributes of OUV defined in the SoOUV have been scoped out of the HIA [APP-195], they are, however, considered in ES Chapter 6, Cultural Heritage [APP-044]. The "later written evidence of subsequent values is explicitly cited as part of the area's OUV" noted by the CBA are addressed in the HIA's consideration of impacts on the seventh Attribute of OUV: the influence of the remains of Neolithic and Bronze Age funerary and ceremonial monuments and their landscape settings on architects, artists, historians, archaeologists and others. This is discussed in impacts on Cultural influences [APP-195, paras. 9.3.74–80] and assessed in Section 9.4, Impacts and effects of Scheme on Attributes of OUV,

		Integrity and Authenticity. Relevant baseline data is presented in HIA Annex 6 - Influences of the monuments and landscape of the Stonehenge part of the Word Heritage Site on architects, historians and archaeologists [APP-201], Annex 7 - Influences of the monuments and landscape of the Stonehenge part of the World Heritage Site on artists [APP-202] and Annex 8 - Influences of the monuments and landscape of the Stonehenge part of the World Heritage Site on literature and popular culture [APP-203]. The Detailed Archaeological Mitigation Strategy (DAMS) [REP2-038] sets out the structured, iterative detailed archaeological mitigation strategy. Mitigation will apply to heritage assets of all periods. The DAMS will be developed further during Examination in consultation with HMAG/WCAS and the final DAMS will be a certified document, implementation of which will be secured as mentioned above by paragraph 5 of Schedule 2 to the draft development consent order [REP2-003]. The Operational Guidelines for the Implementation of the World Heritage Convention note that "Where necessary, the protection and management part of the Statement of Outstanding Universal Value may be updated by the World Heritage Committee, in consultation with the State Party and further to a review by the Advisory Bodies" (UNESCO 2017; e.g. name change, minor boundary review, correction of factual errors). However, this relates to protection and management, not revising the basis of the criteria under which the property was inscribed in 1985/6. The Scheme will not prevent any eventual application by the State Party to re-nominate the WHS to include, for example, the Mesolithic period, and submit this for evaluation by relevant UNESCO Advisory Bodies and the approval of the World Heritage Committee. **Significant discoveries from evaluations** See the Applicant's written summary of oral submissions in relation to agenda item 5(i) of ISH2 regarding the adequacies of content, analyses, assessments and conclusions of the Heritage Impact Assessment, submitted at Deadline 4. Please also refer to Section 21.4 of Highways England's Comments on Written Representations [REP3-013] which describes the full and comprehensive programme of archaeological evaluation surveys that were undertaken to inform the ES and HIA (para. 21.4.2), serious consideration of previous discoveries

		(para. 21.4.3), exhaustive identification of Scheme impacts (para. 21.4.4), potentially significant small features (paras. 21.4.67–74) and full appreciation and understanding of the importance of the WHS and its OUV (para. 21.4.5). Regarding the small hengiform enclosure (10002), this is considered as an isolated discrete feature in the HIA [APP-195, para 6.10.34]. It will not be physically impacted by the Scheme and lies at a distance off the ridge line away from the AG12 Winterbourne Stoke Crossroads Barrows. Regarding the scheduled bowl barrow 250m south west of Longbarrow Cross Roads, west of A360 (NHLE 1011045), this lies off the ridge line on its eastern slope, and as such is considered as part of the AG13 Diamond Group in the HIA [APP-195, pages 209–218]. Severance of the AG12 Winterbourne Stoke Crossroads Barrows, the AG13 Diamond Group, and the group of long barrows in the western part of the WHS by the Scheme are all considered in the HIA [APP-195]. Partial mitigation for the severance is put forward in the form of the 150m long Green Bridge No. 4.
13.1.5	**CH.1.8:** All heritage assets have a setting (the surroundings in which they are set), and the issue is first, whether or not those surroundings contribute to how their significance is experienced and appreciated – and if so how; and second, how development will impact on the surroundings and how such significance is experienced and appreciated. The suggestion that the setting of Blick Mead is adequately assessed because it is part of Amesbury Abbey Park misunderstands the concept of setting. The key aspects of the surroundings of Blick Mead that most obviously contribute to its significance and surroundings are its topographical position at the base of the Avon Valley; the water table and hydrological conditions that result in exceptional preservation (including any localised topography or geology that may underlie these conditions; evidence of any foci of Mesolithic activity (eg from flint scatters) in the area – including any as yet undiscovered remains in similar position in the valley; and, further afield, other Mesolithic monuments predating the Neolithic. As a site not visible on the surface understanding and appreciation is reliant on knowledge of the site through other forms of experience (which could for	**Potential impacts on the setting of the Blick Mead archaeological site** See the Applicant's summary of oral submissions made at ISH2 (submitted at Deadline 4) in relation to agenda item 5(i) regarding the adequacies of content, analyses, assessments and conclusions of the Heritage Impact Assessment, and agenda item 6(vii) regarding the approach to the assessment of the setting of Blick Mead. The Blick Mead Mesolithic site is located within a woodland clearing in the northern part of Amesbury Park, adjacent to the existing A303. The Blick Mead site is screened from new elements of the proposed Scheme by intervening existing woodland. For this reason, this heritage asset was scoped out of the setting assessment. ES Appendix 6.9 - Cultural Heritage Setting Assessment notes that "The 2km study area contains a very large number of heritage assets, only a proportion of which are potentially affected by the Scheme … The initial selection of assets for assessment was primarily based upon the Zone of Theoretical Visibility (ZTV) of the Scheme, since visual impacts generally extend more widely than other impact-types. Nevertheless, this was not the sole criterion, since it is recognised that there could be instances of assets whose visual setting might not be altered by the Scheme, but which could be subject to

	example include on or off- site interpretation). The wooded vegetation of Amesbury Abbey Grade II* RPG is relevant in so far as it may or may not represent some similarity to what is known from paleo-environmental evidence to have existed in the Mesolithic (whether or not a broadly woodland or open environment). Whether or not the proposed scheme would have a significant effect on the setting of the Blick Mead is uncertain due to limitations of detailed knowledge of the archaeology and full hydrological conditions of the immediate surroundings, though the physical extent of below ground impact and hydrological effects may be limited. The east tunnel portal and cutting would have some impact on the local topography in the side of the ridge between the site and the broadly contemporary major Mesolithic structures at Stonehenge. While this would not add much harm (and the tunnel would reduce that severance), an alternative scheme that removed the A303 altogether from the WHS would both remove this risk of additional harm, and potentially remove the existing impact.	other impacts, for example noise, traffic emissions and vibration." [APP-218, paras. 3.2.1–3.2.2]. The ZTV is shown on Figure 6.12a Proposed Scheme Zone of Theoretical Visibility (ZTV) in Relation to the Stonehenge World Heritage Site [APP-078]. As noted in the Setting Assessment, "There would be an impact on the northern boundary and part of the eastern boundary of Amesbury Abbey RPG [Registered Park and Garden] as a result of the Scheme. However, that impact would not extend far into the RPG due to screening provided by the dense vegetation that covers the majority of the northern part of the asset" [APP-218, para. 3.4.10]. As noted in Highways England's Response to the Examining Authority's Written Question CH.1 [REP2-025], para. 8, "The context of the Blick Mead site is its underlying topography and its relationship to the River Avon […]. It is part of a wider distribution of Mesolithic sites within the landscape, described in ES Appendix 6.2 Archaeology Baseline Report [APP-211]." There would be no change to the current setting of Blick Mead due to the Scheme. The Scheme alignment has been optimised past the Blick Mead archaeological site, to avoid land-take and to keep the road at existing grade. Please also refer to Highways England's Comments on Written Representations [REP3-013; paras. 44.2.10; 45.2.26–27; 57.1.7] which note that the setting of Blick Mead would be unchanged as a result of the Scheme and is, in any event, protected by the natural landform by substantial vegetative screening. This is also addressed in Highways England's responses to the Examining Authority's Written Question CH.1.17 [REP2-024, implications of construction at Countess Roundabout on Blick Mead]; and CH.1.45, [REP2-024, visual impact of Countess flyover on Blick Mead]. **Potential impacts on archaeological remains at and the preservational environment of the Blick Mead archaeological site.** See the Applicant's summary of oral submissions made in relation to agenda item 8 of ISH2 regarding Blick Mead, submitted at Deadline 4. It is not correct that the effect of the Scheme on Blick Mead is uncertain. As noted in Highways England's response to Written Question CH.1.8, "The Scheme alignment has been optimised past the Blick Mead archaeological site, to avoid land-take and to keep the road at existing grade. Ground water modelling indicates no impact on Blick Mead (Abbey Pond) or the River Avon (see Blick

		Mead Tiered Assessment presented, ES Appendix 11.4 - Groundwater Risk Assessment, Annex 3 [APP-282]). The ES therefore reports No change and a Neutral Effect on the Blick Mead archaeological site (Appendix 6.8 - Cultural Heritage - Summary of non-significant effects [APP-217, page 5]) [REP2-024, Written Question CH.1.8]. Please refer to Highways England's Comments on Written Representations [REP3-013, paras. 21.4.59–62] regarding assessment of the Scheme's potential impacts on groundwater levels and flows which show that there will not be any adverse effect on groundwater levels at Blick Mead, or the preservation of its archaeological remains. This is also addressed in Highways England's responses to the Examining Authority's Questions CH.1.31 [REP2-024, modifications to the Scheme arising from consideration of results of Blick Mead excavations]; Written Question Fg.1.26 [REP2-031] regarding hydrological monitoring at Blick Mead, additional investigation and monitoring, and tiered assessment; Written Question Fg.1.27 [REP2-031] regarding water meters at Blick Mead and the related data; appropriate baseline timescales; Written Question Fg.1.28 [REP2-031] regarding hydrological monitoring at Blick Mead; and Written Question Fg.1.29 [REP2-031] regarding groundwater study approach and methods.
13.1.6	**CH.1.9:** The distinction between temporary and permanent effects is crucial for heritage assets at whatever stage they arise, and this includes indirect effects. Permanent loss of archaeology or other assets and damage to heritage settings or historic character (generally considered for EIA purposes to last a generation or more) can arise from both temporary construction works and many different physical aspects of the constructed scheme, and from its use by traffic once opened (including noise air quality and additional visual intrusion). After the scheme may become redundant, it would on any foreseeable basis remain a major 21st century structure within the WHS. From a policy perspective permanent loss of irreplaceable heritage is more serious than gains in amenity and access. There is currently significant uncertainty about whether there would be permanent effects on archaeological remains due to be protected from harm during temporary construction activity because no technical	**Temporary and permanent effects** See the Applicant's summary of oral submissions made at ISH2 (submitted at Deadline 4) in relation to agenda item 5(i) regarding the adequacies of content, analyses, assessments and conclusions of the Heritage Impact Assessment, and agenda Item 3 regarding policy and guidance. See the Applicant's response within agenda item 5 of the written summary of oral submissions at ISH5 regarding noise impacts and mitigation measures during the construction and operations periods, and agenda item 6(iii) regarding vibration impacts and mitigation measures during the construction and operations periods. ES Chapter 6, Cultural Heritage, considers both temporary and permanent impacts and effects, as set out in Section 6.7, Potential impacts and Section 6.9, Assessment of effects [APP-044]. ES Chapter 6 notes "Impacts may arise during construction or operation and can be temporary or permanent, and direct or indirect." [APP-044, para. 6.3.18] Indirect, secondary, in combination and cumulative impacts are also considered in the HIA [APP-195].

	calculations – even at a ball-park level – have been made of what protective measures are required to prevent compaction, crushing or distortion effects under the types and loads of machinery concerned. No consideration at all has been given to the indirect effects of possible subsequent cultivation measures taken to remedy any actual or perceived soil damage.	**Scheme redundancy and decommissioning** Highways England's Response to Written Question CH.1.34 regarding the decommissioning of the Scheme [REP2-025] notes that "It is highly unlikely that the Scheme would be demolished after its design working life as the road would have become an integral part of nationally important infrastructure." The HIA discusses the temporal scope of the Scheme [APP-195, paras. 5.6.5–5.6.16] and considers the theoretical decommissioning of the Scheme in Section 9.2 [APP-195, paras. 9.2.14–9.2.25]. **Policy compliance** It is not clear the policy basis for the assertion that "permanent loss of irreplaceable heritage is more serious than gains in amenity and access". The Applicant has demonstrated previously the compliance of the Scheme with policy, and this was again set out by the Applicant in its oral submissions in relation to agenda item 3 of ISH2 (see written summary submitted at Deadline 4). With regard to policy compliance, please also see Highways England's Comments on Written Representations [REP3-013, paras. 3.2.1–3.2.3; 3.3.7; 12.3.2.4; 12.3.83-89; 12.3.123; 12.3.144-6; 12.3.161; 21.2.48–58; 21.4.13-15; 21.4.19-23]. To the extent the written submission is referring to paragraph 5.131 of the NPSNN, the Scheme's compliance with the NPSNN requirements is demonstrated in the NPSNN accordance table in Appendix A of the Case for the Scheme and NPS Accordance [APP-294]; the Scheme is not assessed to cause substantial harm to heritage assets, and where there is less than substantial harm expected, those instances are considered to be outweighed by the Scheme benefits. With regard to NPSNN para. 5.136, "Where the loss of significance of any heritage asset has been justified by the applicant based on the merits of the new development and the significance of the asset in question, the Secretary of State should consider imposing a requirement that the applicant will prevent the loss occurring until the relevant development or part of development has commenced." The NPSNN Accordance Table [APP-294, pp. A-98-9] notes that "*The Scheme would result in the loss of some archaeological remains of low and medium value both outside and within the WHS and would change the setting of scheduled monuments close to the western and eastern approach cuttings. No preliminary works (including advanced archaeological mitigation works) would*

		commence either within the WHS or outside it until the DCO is granted by the Secretary of State. Relevant controls on these preliminary works are included in the OEMP, which is secured by a DCO requirement." **Preservation in situ of archaeological remains & cultivation measures** Regarding preservation in situ and cultivation measures, please see response to item 13.1.2 above. See the Applicant's written summary of oral submissions made in relation to agenda item 7(i) of ISH2 regarding the Detailed Archaeological Mitigation Strategy (DAMS), submitted at Deadline 4. It is not correct that there is currently significant uncertainty in terms of permanent effects on archaeological remains. Permanent impacts on archaeological remains from construction are as set out in the ES [APP-044, Table 6.11] and Environmental Statement Appendix 6.8 - Cultural Heritage - Summary of non-significant effects [APP-217, Tables 1.2–1.5]. Preservation in situ methods are as set out in the draft DAMS submitted at Deadline 4 (paragraphs 4.3.7–12 and Section 5.2). Regarding preservation in situ of archaeological remains and measures in relation to soil handling and restoration of soil, these issues have been addressed elsewhere and in this response to CBA's written submissions. Please see for example the response within this document in relation to Written Question CH.1.3 and CH.1.50 [REP2-025]. Possible subsequent cultivation measures taken to remedy any actual or perceived soil damage would be addressed in the main works contractor's Method Statement: Item MW-CH5 of the Outline Environmental Management Plan (OEMP) [REP3-006]. This requires that the main works contractor "will prepare a Method Statement setting out where appropriate, how the measures would be reversed following the end of construction, e.g. at compound locations, the ground and the surface returned to its original shape and condition."
13.1.7	**CH.1.15:** The response does not seek to clarify on the basis of the sample so far surveyed by different methods and the relative reliability in identifying	**Reliance on evaluation results, evaluation as a predictive tool, sampling strategy**

	different types of archaeology what the true scale of archaeology within the red line area might be. The response also fails to explain what scope there is for redesign within the red line area (ie the extend to which changes in vertical or horizontal alignment or even layout of the new Longbarrow Junction) might result in variance outside the areas most fully evaluated. It is not clear where the temporary bridges for the A303 and A360 would be or whether additional impacts would arise from their foundations.	See the Applicant's written summary of submissions made in relation to agenda item 5(i) of ISH2 regarding the adequacies of content, analyses, assessments and conclusions of the Heritage Impact Assessment, submitted at Deadline 4. Please also refer to Section 21.4 of Highways England's Comments on Written Representations [REP3-013] which describes the full and comprehensive programme of archaeological evaluation surveys that were undertaken to inform the ES and HIA (para. 21.4.2). Highways England considers there is sufficient information provided in the application to allow the Scheme's likely significant effects to be understood and to inform the need for mitigation. A comprehensive programme of archaeological evaluations, the scope of which was agreed with the Heritage Monitoring Advisory Group (HMAG) and endorsed by the Scientific Committee, has been completed within the scheme order limits, which includes land to be acquired temporarily and permanently, both within and outside of the WHS. Wiltshire Council confirmed at ISH2 that the archaeological evaluation is considered comprehensive. As noted in Highways England's Comments on Written Representations [REP3-013, para. 21.4.7], "The development consent application for the Scheme is accompanied by 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 to augment the previous work to achieve an overall sample of up to 5% by area outside of the WHS and up to 10% by area within the WHS, and taking into account the emerging results of academic research programmes undertaken over the last decade." Please refer to Highways England's response to Written Question Se.1.18 [REP2-035] regarding the programme of archaeological evaluation; and Highways England's Comments on Written Representations [REP3-013, paras. 21.4.25–32] regarding the evaluation programme and sampling strategy [REP3-013, paras. 21.4.30; 21.4.67–74], and mitigation-stage sampling [REP3-013, paras. 21.4.99-102; 60.2.44]. **What is the scope for redesign/Limits of Deviation (LoD)**

		The effect of the development consent order is that detailed design cannot take the Scheme beyond the Order limits and Limits of Deviation (LoD) secured by the Order. The assessment of the Scheme has been informed by the LoD, and as a result, so has the archaeological mitigation proposed in the DAMS. No additional evaluation will therefore be required as a result of detailed design, beyond that already provided for in the DAMS. The parameters of the permission sought are constrained to the horizontal limits established by the Works Plans [APP-008], the vertical limits of the Engineering Section Drawings (Plan and Profiles) [APP-010], the Engineering Sections Drawings (Cross Sections) [APP-011] and the Tunnel LoD Plan [APP-019], subject to the LoD established by Article 7 of the draft development consent order. As noted in Highways England's response to Relevant Representations [AS-026], • "The Environmental Statement [APP-039 – APP-054] and Heritage Impact Assessment [APP-195] consider the maximum area of land anticipated as likely to be required, taking into account the proposed limits of deviation (LoD) for the Scheme and the flexibility of detailed design provided for in the development consent order [APP-040]. The assessments therefore take into consideration what can be regarded as a realistic 'worst case' assessment of the impacts associated with the proposed scheme. Therefore, any movement within the design LoD would not result in a worsening of significant effects reported in the respective assessments" [AS-026, p. 13-6]. • "The Limits of Deviation (LoDs) set out the maximum parameters necessary to deliver the Scheme based on the information available at this stage in the process. The Environmental Statement [APP-039 – APP-054] and Heritage Impact Assessment (HIA) [APP-195] report on the effects of the Scheme to the extent of the LoDs." [AS-026, p. 23-3]. There is therefore scope for redesign within the LoDs, but this will not impact upon areas which have not already been subject to archaeological evaluation. As noted in Highways England's response to written Question CH.1.15 [REP2-025], "Paragraphs 2.4.17 – 2.4.20 of the Environmental Statement Chapter 2 - The Proposed Scheme [APP-040] set out the Scheme's proposals for haul routes, and the routes are shown indicatively on Environmental Statement Figure

		2.7 A-E. [APP-061]. Further information on haul routes is also set out in the Deadline 1 submission at REP1-005." With regard to the temporary bridges for the A303 and A360, the locations of these are shown on ES Figure 2.7 [APP-061]. The detailed construction methodology will be developed by the Contractor as part of its detailed design.
13.1.8	**CH.1.16:** The statement "To protect archaeology and prevent the deformation of topsoil and subsoil horizons, haul roads would be built under a 'no dig' solution, wherever possible" coupled with the provision in the Draft Archaeological Mitigation Strategy that where not possible any archaeological remains would be excavated, provides very little confidence in this proposal when calculations have not been done and no consideration has been given to agricultural soil restoration. This is further cast into question by the absence of any reference to this issue in the Geology and Soils chapter of the ES (Chapter 10 sections 10.7-10.8) and the statement in the OEMP (General Provisions – Site Management p38) that "b) temporary earth bunds, created from excavated soil, shall be located around the perimeter of the compounds" but no reference to haul roads. The air quality provision for Haul Roads in the OEMP says that the Plan would "d) Impose and signpost a maximum-speed-limit of 15mph on surfaced and 10mph on un-surfaced haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided)." Speed of heavily laden dumper trucks and other plant has a bearing on the risk of compaction and rutting, and here again there is no clarity of what implications arise for the claimed "'no dig' solution." The OEMP provision for Haul Roads (p67) makes cross refence to the requirements of the Heritage Management Plan. The more general reference to a 'Soils Management Plan' is not evident in any draft form to address this. Given the existence of well-established standards for soil handling and replacement for agriculture it seems very unlikely that the 'no dig' solution is any such thing: far more likely the	**Preservation in situ** Regarding preservation in situ of archaeological remains and agricultural soil restoration, please see response to item 13.1.2 above, with respect to Written Question CH.1.3. See response detailed in agenda item 7(i) of ISH2 regarding the Detailed Archaeological Mitigation Strategy (DAMS) submitted at Deadline 4 regarding the mitigation methods: adequacy in themselves and in their application to particular sites. Preservation in situ methods are as set out in the draft DAMS submitted at Deadline 4 (paras. 4.3.7–12 and Section 5.2). See response detailed in agenda item 8.2 of the written oral submission for ISH4 on Waste and Materials Management regarding the onsite depositing of tunnel arisings. With regards to haul roads, Section 4.2 of the draft DAMS [REP2-038] considers the approach in paragraphs 4.2.17 to 4.2.24. The DAMS requires that in accordance with item MW-CH5 of the OEMP, the main works contractor will prepare a Method Statement, setting out how it intends to preserve in situ sensitive archaeological remains and prevent deformation of topsoil/ subsoil horizons (including no-dig solutions), and how the measures would be reversed following the end of construction (i.e., the removal of haul roads and compounds). Note that an all-weather haul road is proposed in the OEMP, as well as speed limits [REP3-006, items MW-AIR1]) and maintenance of the haul road surface [REP3-006, items MW-AIR2]. Topsoil stripping is not proposed for haul roads, a no-dig solution is preferred (see the draft DAMS submitted at Deadline 4, paragraph 4.2.27). The fill materials for the haul roads are intended to be won from excavated material from the road cuttings during construction. Regarding the archaeological evaluations please refer to Section 21.4 of Highways England's Comments on Written Representations [REP3-013] which describes the full and comprehensive programme of archaeological evaluation

	works will involve topsoil stripping with the loss of spatial evidence in ploughzone archaeology prior to installation of geotextile and adequate buffering material. Soil stripping for archaeological purposes is substantially different from general topsoil stripping for construction if in situ archaeology is not to be disturbed, requiring care – to within centimetre tolerances – to remove only topsoil, especially where small shallow prehistoric remains are concerned. Since this will be part of the preliminary works there is no indication where the fill material to create haul roads and compounds without subsoil disturbance would come from or how they would be placed without damaging archaeology (cf DMRB Volume 10 Section 1 Chapters 5 and 6). Once construction work has finished, the removal of temporary fill material and replacement of topsoil without compacting it OR running on the exposed archaeological horizon presents a whole extra problem. This is without any perceived need for agricultural soil decompaction after land has been returned to farming use. Overall the provisions for preservation in situ outlined to date are theoretical not practical and are not backed up by clear evidence of deliverability. Given the areas concerned, the lack of complete archaeological coverage especially outside the permanent footprint of the scheme leaves great uncertainty. This is especially concerning within the WHS and its environs particularly where archaeology of clear significance has been found outside the WHS in the vicinity of the Winterborne Stoke Barrow Group. The comment that all temporary landtake for haul roads (or other construction works?) would be outside the WHS does not mean that it would be outside the areas that contribute to its OUV.	surveys that were undertaken to inform the ES and HIA (para. 21.4.2), appropriate sampling (paras. 21.4.7; 21.4.30; 21.4.67), serious consideration of previous discoveries (para. 21.4.3), exhaustive identification of Scheme impacts (para. 21.4.4), potentially significant small features (paras. 21.4.67–74) and full appreciation and understanding of the importance of the WHS and its OUV (para. 21.4.5). Highways England continues to engage with members of HMAG to confirm the suitability of the proposed mitigation measures for the protection of archaeological remains in situ. A meeting to discuss these issues with Wiltshire Council and HMAG was held on 19 June 2019. An updated draft DAMS is submitted at Deadline 4.
13.1.9	**CH.1.19 and CH.1.20:** As noted in our comments on policy (Appendix d para D 6), NPPF para 193 states that great weight must be applied 'irrespective of whether any potential harm amounts to substantial harm, total loss or less than	See the Applicant's written summary of oral submissions made in relation to agenda item 3 of ISH2 regarding the Scheme's compliance with relevant policy and guidance, submitted at Deadline 4.

	substantial harm to its significance.' These matters therefore warrant clarification.	Whilst the NPPF policies will be a material consideration in the decision whether to grant consent for the Scheme, the application is required to be decided in accordance with the National Policy Statement for National Networks (NPSNN). The NPSNN includes a similar policy to 193 at paragraph 5.131 which provides that "the Secretary of State should give great weight to the asset's conservation. The more important the asset, the greater the weight should be." The Scheme's compliance with the NPSNN requirements is demonstrated in the NPSNN accordance table in Appendix A of the Case for the Scheme and NPS Accordance [APP-294]. In particular, with respect to paragraph 5.131, the Applicant has given appropriate weight to impacts on heritage assets. Chapter 6 Cultural Heritage of the Environmental Statement [APP-044] identifies less than 'substantial harm' to the significance of heritage assets relating to negative changes to their setting, arising from the presence of the new road and its associated infrastructure, and/or from changes to the visual and aural impact of traffic during its operation. These effects are summarised in tables 6.11 and 6.12 of the Environmental Statement. The effects of the proposed Scheme on the settings of heritage assets, and on their significance or on the ability to appreciate it, are described in ES Appendix 6.9 - Cultural Heritage Setting Assessment [APP-218]. Effects on the setting of Asset Groups and on designated isolated and discrete assets which contribute to the OUV of the WHS are detailed in Heritage Impact Assessment (HIA) Sections 6.9 and 6.10, and summarised in Section 9.4, Chapter 9 of the HIA. Chapter 11 of the HIA sets out the overall impact and significance of effect of the Scheme on the OUV of the WHS. Alignment with the 2015 Stonehenge, Avebury and Associated Sites WHS Management Plan vision, aims and policies is considered in Section 12.3 of the HIA. The relative significance of designated and non-designated heritage assets within the WHS on an international, national and local scale, and their contribution to conveying the OUV of the WHS, are also described in the HIA [APP-195, Section 5.7, Evaluation of heritage resource]. In addition to the heritage benefits, the Scheme would deliver a range of substantial economic, transport, environmental and community benefits, which are summarised in the Case for the Scheme and NPS accordance [APP-294, Chapter 5, Table 5-1]. These benefits are considered to outweigh the less than substantial harm."

		Regarding policy compliance, please also see response to item 13.1.6 above.
13.1.10	**CH.1.21:** It remains unclear how the various mitigation plans especially for preservation in situ will be meshed together. As indicated above, the sequencing of works for the establishment of temporary construction works and soil management is critical but not at all clear. The statement *"Upon completion of construction, where land is not required as part of the Scheme, the haul roads would be returned to the existing land use, pursuant to the terms of the DCO"* is very simplistic and provides no confidence that reinstatement and subsequent use will not cause additional damage to archaeological remains, especially as it is not stated under what the terms of the DCO would be in this respect.	**Preservation in situ & reinstatement** Regarding preservation in situ of archaeological remains and soil management, please see response to item 13.1.2 above in relation to Written Question CH.1.3. In terms of haul roads being returned to the existing land use, the DAMS requires that in accordance with item MW-CH5 of the OEMP, the main works contractor will prepare a Method Statement, setting out how it intends to preserve in situ sensitive archaeological remains and prevent deformation of topsoil/ subsoil horizons (including no-dig solutions), and how the measures would be reversed following the end of construction (i.e., removal of haul roads and compounds). Implementation of both the DAMS and OEMP are secured by requirements to the DCO. Highways England continues to engage with members of HMAG to confirm the suitability of the proposed mitigation measures for the protection of archaeological remains in situ. A meeting to discuss these issues with Wiltshire Council and HMAG was held on 19 June 2019. An updated draft DAMS is submitted at Deadline 4.
13.1.11	**CH.1.23:** In-combination effects can include both impact interactions (heritage setting issues being an extremely clear example) and cumulative effects of a particular character. Both figure large in the proposed scheme, but are poorly articulated. Setting issues almost involve interactions with landscape, visual and noise intrusion and land utilisation and habitat creation (or loss); some concern hydrology and air quality. In addition, there are numerous in-combination effect that relate to multiple monuments which in some cases have been grouped arbitrarily rather than on archaeological grounds. The overall effects of the scheme on key characteristics of OUV of the WHS are not analysed. For example, despite fieldwork being conducted on the basis of scientific	See response detailed in agenda item 5(i) of ISH2 regarding the adequacies of content, analyses, assessments and conclusions of the Heritage Impact Assessment (HIA), submitted at Deadline 4 and item 6 of ISH2 regarding the effect of elements of the proposed development on cultural heritage assets and their settings, submitted at Deadline 4. With regard to the claim that "multiple monuments [...] in some cases have been grouped arbitrarily rather than on archaeological grounds", the Applicant has taken very seriously its duty to identify those Asset Groups. The 2015 Joint World Heritage Centre / ICOMOS Advisory Mission report (ICOMOS 2016, 10) noted that the methodology outlined in the HIA Scoping Report was appropriate and that the HIA should have particular regard to previous outline HIAs by Historic England and the National Trust (Snashall & Young 2014; ibid. 2017) [APP-195, para. 5.10.8]. The HIA has been prepared in accordance with the HIA Scoping Report and the identification of asset groups has had regard to the previous

	sampling there is no forecast or estimate of the actual quantity and character of archaeology likely to be disturbed; nor, based on the specific research themes identified is there any overview of the what the total loss of archaeology would be relative to key OUV issues. In respect of setting, there is no consideration of how the permanent changes in landform in the ridges in the E and W parts of the WHS would exacerbate rather than reduce the impact of the current road in terms of the relationship between monuments and their surrounding landscape. There is likewise no consideration of the in-combination effects on the OUV of the WHS taking account of effects both outside it (ie the WHS 'environs' or setting - or areas potentially to be included if the boundary were extended).	outline HIAs Please see Highways England's Comments on Written Representations [REP3-013, paras. 21.4.35–37]. The potential for in-combination effects is considered through the assessment of cumulative effects, as reported in ES Chapter 15 [APP-053]. Please see Highways England's Comments on Written Representations [REP3-013, paras. 21.4.54–58] for further information on in-combination assessment. The Scheme is assessed in the Heritage Impact Assessment [APP-195] to have a Slight Beneficial effect on the Outstanding Universal Value (OUV) of the WHS as a whole. This takes into account that of the seven attributes of OUV for the WHS, whilst the Scheme will have a slight adverse effect on two of those attributes, it will have a beneficial effect on the remaining five (being a slight beneficial effect on three of the attributes, a large beneficial effect on one, and a very large beneficial effect on one). This conclusion also takes into account that the Scheme will have a slight beneficial effect on the authenticity and integrity of the WHS. The HIA also considered aspects of the Scheme including inputs from specialists in Landscape and Visual Impact Assessment, Noise, Air Quality, Biodiversity, Hydrology and Ground Water and Land Use and whether there was potential for in-combination effects on the Attributes that convey the OUV of the WHS [APP-195, paras. 5.3.52–55]. Regarding the boundary review, archaeological remains, discrete assets and asset groups and their settings, which were situated beyond the current WHS boundary and that were considered to contribute to the OUV of the WHS, were included as part of the HIA (see responses to Written Questions CH.1.58 [REP2-025] and AL.1.19 [REP2-024]). Therefore, the HIA has considered the impact of the Scheme upon these and their settings (as part of undertaking the HIA on the whole WHS) and, as above, the possible in-combination effects from interactions with other disciplines. Please also refer to Section 21.4 of Highways England's Comments on Written Representations [REP3-013] which describes the full and comprehensive programme of archaeological evaluation surveys that were undertaken to inform the ES and HIA (para. 21.4.2). Highways England do not agree that the Scheme exacerbates the impacts of the current surface road in terms of the relationship between monuments and their surrounding landscape. Changes in the landform, with the construction of approach road cuttings and portals, have been considered as part of the HIA. Highways England have designed a scheme that removes the surface A303, and the accompanying sight and sound of traffic on it

		from a large proportion of the WHS enabling beneficial change to the setting of many monuments and asset groups that contribute to the OUV of the WHS. The Scheme has been sensitively designed with the use of a 2 mile long tunnel, retained deep road cuttings, essential chalk grassland mitigation to enable landscape integration, a 150m long land bridge (Green Bridge No. 4) to enable visual and physical landscape connectivity and public access, canopies and hidden tunnel portals at the heads of dry valleys within the WHS landscape.
13.1.12	**CH.1.29:** Please see comments previously submitted (**REP2a-005** CBA – *Supplementary Observations [on].. Archaeological Survey Reports and Draft Mitigation Strategy*) and additional comments above and below concerning mitigation of temporary works and the likely need for prior topsoil stripping of all temporary work areas, which has not been clarified with reference to soil management requirements. The OEMP and DAMS remain insufficient to be confident that additional harm would be avoided or that other sufficiently effective mitigation would be delivered.	See Applicant's written summary of oral submissions made at ISH2 (submitted at Deadline 4) in relation to agenda item 7 (i and ii) regarding the Detailed Archaeological Mitigation Strategy (DAMS), and agenda item 4.3 of ISH1 regarding the DCO Requirement 4 - Outline Environmental Management Plan (OEMP), submitted at Deadline 4. See also Highways England response to CBA REP2a-005 Written Representation [REP3-013, Section 21]. Regarding preservation in situ, please see response to item 13.1.2 above. As explained at the issue specific hearings, topsoil and its re-deposition would be managed through the soil management strategy, secured in the Outline Environmental Management Plan (OEMP) [REP3-006, Table 3.2b REAC tables for the main works, item MW-GEO3]. That soil management strategy would take cognisance of any archaeological considerations, as required by the DAMS. Item MW-GEO7 then sets out what the main works contractor must develop to form part of the soil management strategy. This includes: "*Soils Handling Strategy, with reference to BS3882: 2015 Specification for Topsoil and the Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Site. This shall* ***incorporate the soils handling measures outlined within the DAMS****, identify locations where archaeological in-situ preservation is required and consider areas to be returned to agricultural use* […]" (words in bold have been added to the OEMP for Deadline 4, to spell out for the avoidance of doubt the compatibility between the OEMP and DAMS) This is further bolstered by the new paragraph 5.2.11 in the updated DAMS submitted at Deadline 4.

		Further detail in terms of soil restoration following temporary works is set out above in relation to Written Question CH.1.3 [REP2-025]. It is considered that the measures proposed in the DAMS and OEMP are sufficient with respect to soil management and ensuring effective mitigation. In any event, Highways England continues to engage with members of HMAG to confirm the suitability of the proposed mitigation measures for the protection of archaeological remains in situ. A meeting to discuss these issues with Wiltshire Council and HMAG took place on 19 June 2019. An updated draft DAMS, developed to respond to comments received at Deadline 3 is submitted at Deadline 4.
13.1.13	**CH.1.36:** There is no indication here of how additional evaluation and/or recording action would be secured for areas affected by any detailed design changes or contractor's works proposals within the DCO boundary. There appears to be nothing in the draft DCO to secure ongoing preservation of archaeological remains on land acquired for temporary use (see above and below).	The effect of the development consent order is that detailed design cannot take the Scheme beyond the Order limits and Limits of Deviation (LoD) secured by the Order. The assessment of the Scheme has been informed by the LoD, and as a result, so has the archaeological mitigation proposed in the DAMS. No additional evaluation will therefore be required as a result of detailed design, beyond that already provided for in the DAMS. The DAMS will respond to the final detailed design of the Scheme through the production of the Site-Specific Written Scheme(s) of Investigation (SSWSIs) and Method Statements pursuant to the DAMS. This would include any additional detailed archaeological evaluation to confirm the appropriate mitigation response. The requirements of the DAMS apply equally to land subject to temporary possession under the DCO. Regarding preservation in situ of archaeological remains, please see response to item 13.1.2 above.
13.1.14	**CH.1.37:** The response does not address the detailed question as to how the cumulative impact of both temporary and permanent landtake would be programmed to ensure fulfilment of both *in situ* preservation and ALL necessary archaeological investigation and recording including the contingencies needed for a) detailed design changes with the DCO boundaries; and b) cases where *in situ* preservation cannot be secured with confidence over every stage of temporary works and landscaping (see also comments on risks of unforeseen discoveries below).	As the DAMS makes clear, the majority of the archaeological mitigation fieldwork will be undertaken during the preliminary works (PW) stage of the construction programme. Archaeological mitigation will commence as part of the PW stage and will be scheduled to be completed before the start of the main works (MW) stage, except for specific works that will necessarily only take place under the MW contract. Site works will take place over three phases spanning the PW and MW stages, as set out in 6.2 and 6.3 of the draft DAMS [REP2-038]. It is already clear, then, that in situ preservation, archaeological investigation and recording is all programmed to take place before the commencement of the main works as set

		out in the DAMS, which is secured by paragraph 5 of Schedule 2 of the draft development consent order. The DAMS applies to the scheme as applied for, therefore it applies in full to the detailed design, within the parameters of the scheme as applied for, no matter what that detailed design is. There is therefore no 'contingency' required for changes to detailed design. The detailed design must be within the consented parameters and the DAMS is designed to apply to the Scheme within those parameters. Equally the draft DAMS submitted at Deadline 4 already makes clear the requirements regarding preservation in situ [REP2-038, paragraphs 4.3.7–12 and Section 5.2], including where it is not possible, and procedure for dealing with unforeseen finds (paras. 5.1.17–19). Regarding preservation in situ of archaeological remains and application of the DAMS to temporary works, please see response to item 13.1.2 above.
13.1.15	**CH.1.38:** The approach adopted has taken a narrow view of current experiences, not the full potential that could be established were the Management Plan to be delivered in full. With an alternative scheme that removed the A303 and ideally the A360 from the WHS and its setting (or potential westward expansion) the cumulative beneficial effects would be far higher and the additional cumulative negative effects in the vicinity of King Barrow Ridge and the Longbarrow Crossroads Ridge would not only be avoided, but the current impacts of the A303 would be remedied.	Highways England disagrees that the approach taken in the HIA is a narrow view of current experiences (see Highways England's response to Written Questions CH.1.38 and CH.1.7 [REP2-025]). The approach is as set out in the HIA Scoping Report and was accepted as appropriate by UNESCO/ICOMOS in their report from their third advisory mission on the scheme early in 2018. See also response above to item 13.1.4 and Historic England's comment that they concur that Highways England has properly undertaken its HIA with regards to the OUV on the whole of the WHS. With regard to an alternative scheme that removed the A303 and ideally the A360 from the WHS and its setting, please see response to Written Question AL.1.29 [REP2-024] and Highways England's Comments on Written Representations [REP3-013, Section 21.1, Alternatives]. Highways England maintain that it is not the purpose of the Scheme to deliver the WHS Management Plan 2015 in full. Highways England will continue to work with WHS partners and stakeholders to maximise the legacy opportunities that could arise from the Scheme. Highways England's A303 Benefits and Legacy Forum and Benefits Steering Group, 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 (Simmonds & Thomas 2015; http://www.stonehengeandaveburywhs.org/assets/Stonehenge-and-Avebury-WHS-Management-Plan-2015.pdf).

13.1.16	**CH.1.41:** The question relates to a key aspect of the WHS OUV, which concerns the relationship of monuments to the landscape and the setting of the WHS and how its OUV can be experienced from beyond its boundary. As we have previously commented the ES and HIA have systematically under recognised and/or downplayed these considerations. HE's response is another example of the dismissive approach taken to this key aspect of the how the relationship of monuments to topographical position is experienced moving through the landscape.	See the Applicant's written summary of oral submissions made at ISH2 (submitted at Deadline 4) in relation to agenda items 4(i) and 4(iii) regarding the World Heritage Site in context, agenda item 5(i) regarding the adequacies of content, analyses, assessments and conclusions of the Heritage Impact Assessment, and agenda item 6 regarding the effect of elements of the proposed development on cultural heritage assets and their settings. As noted in Highways England's Response to the Examining Authority's Written Questions - Cultural heritage (CH.1) [REP2-025, CH.1.41], the ES [APP-044], the HIA [APP-195] and the Setting Assessment [APP-218] consider the landscape and setting of the WHS and how its OUV can be experienced from beyond its boundary. As noted in Highways England's Response to the Written Question CH.1 [REP2-025], the ES and HIA assessed the asset groups beyond the WHS boundary which are considered to contribute to the OUV of the WHS.As noted in Highways England's Comments on Written Representations [REP3-013], the HIA is a comprehensive assessment that has been prepared following ICOMOS guidelines (https://www.icomos.org/world_heritage/HIA_20110201.pdf). The scope and approach of this assessment is reported in ES Appendix 6.1 [APP-195] and was accepted as appropriate by UNESCO/ICOMOS in their report from their third advisory mission on the scheme early in 2018. The Applicant considers that the HIA has been carried out accurately and with a full appreciation and understanding of the importance of the WHS and its OUV, and does not accept that it has under-recognised, downplayed or been dismissive of any aspect of its assessment. As noted in Highways England's Comments on Written Representations [REP3-013], the Applicant considers that the assessment approach has allowed for an accurate assessment of impacts on the attributes of OUV. "With reference to Interim Advice Note 135/10 which forms the basis of the Landscape and Visual Impact Assessment [APP-045], static views are referred to as from a residential property (IAN135/10, para. 3.9). The ES photomontages include representative views from residential properties. Kinetic views are also included as representative of people moving through the landscape, I.e. on Public Rights of Way or road networks.

13.1.17	**CH.1.42:** It is clear that this feature would be severed and that it is part of a designated monument: it is large and well-preserved below ground. The loss of a 60m length of a major prehistoric boundary of national importance is not trivial. The assessment of its being a 'minor' impact after mitigation is irrelevant to the planning balance, since that must be carried out **without** taking account of the ability to record remains that would be lost. It should also be noted that according to the mitigation strategy between 60% and 80% of the affected length would NOT be excavated (cf **REP2a-005**). Given the size of the ditch this is a significant amount of deposit to be lost without record.	South of the modern A303, the **scheduled** part of the land boundary (UID 2014.01, NHLE 1010837) is an upstanding earthwork which will not be directly physically impacted by construction. This section of linear boundary is c.1 km in length and consists of a bank 5 m wide and c.0.5 m high, flanked on its western side by a ditch 5 m wide and 0.7 m deep. There would be no physical impact on the scheduled remains. A **non-designated** stretch of the linear boundary (in the form of a buried ditch with no surface trace; UID 2014.02, Wilts HER MWI6406), visible as a cropmark on aerial photographs, would be severed by the construction of the retained cut. A trench excavated through the feature in the early 2000s revealed a very large ditch aligned approximately north-west to south-east. The fills of the ditch produced animal bone, worked flint and burnt flint, and a single sherd of Roman pottery from its upper fills (Wessex Archaeology 2002f). The ditch was subject to further excavation in January 2013 immediately to the south-west of the Winterbourne Stoke Crossroads. This established that the ditch was 4.6m wide and was 1.5m deep. Although no artefacts were recovered to confirm the suspected Late Bronze Age date of the ditch, this was considered to be the most likely conclusion (Wessex Archaeology 2014b). The ES assesses Minor impact magnitude (post-mitigation) on the High value asset, resulting in a permanent slight adverse residual significance of effect [APP-217, Environmental Statement Appendix 6.8 - Cultural Heritage - Summary of non-significant effects, Table 1.2: Construction phase: permanent physical impacts – archaeological assets]. This assessment of the scale of change takes into account the extent of the monument which runs for c. 1.9km: c. 35m would be removed by the realigned A360 and c. 25m by the cutting approach to the western portal. The approach to the assessment of the significance of effects is in line with DMRB Volume 11, Section 2, Part 5 [HA205/08; "http://www.standardsforhighways.co.uk/ha/standards/dmrb/vol11/section3/ha20807.pdf"http://www.standardsforhighways.co.uk/ha/standards/dmrb/vol11/section3/ha20807.pdf]. This provides guidance on the assessment and management of environmental effects, including advice on determining the magnitude of impacts and the significance of effects. It notes that "Mitigation avoids or reduces the potential adverse effects of the scheme, and powers to undertake mitigation are enshrined in the relevant highway legislation. Mitigation is guided by the Design Objectives. The consideration of appropriate mitigation is necessary for all schemes where there is a potential adverse impact. The assessment of the

		magnitude of impact, and therefore, the assessment of the significance of effects, must take into account the extent to which agreed mitigation measures reduce adverse impacts." [HA205/08; para 4.32]. "Mitigation that addresses an adverse effect through advancing knowledge, such as the archaeological investigation of a site that is to be destroyed, should not be counted as a beneficial effect, despite any contribution such an investigation may make to Design Objectives. Mitigation serves to limit the negative impact of the destruction" [HA205/08; para. 4.36]. As noted in ES Chapter 6, Cultural Heritage [APP-044, para. 6.3.23], the assessment of effect takes into consideration any embedded and additional mitigation. In terms of the regard that may be had to the ability to record remains, the Applicant has responded to this point in detail in Appendix B to the Applicant's written summary of its oral submissions made at the ISH2, submitted at Deadline 4. It is clear from recent case law that the effect of paragraph 5.139 of the NPSNN is not that the recording of evidence may not be taken into account by the Secretary of State. The recording should be considered alongside all other factors in assessing the planning balance applying to the Scheme, including the environmental, economic and OUV benefits that it delivers; the recording cannot be a decisive factor on its own. The sampling strategy in the draft DAMS clearly sets out a **minimum** 20% sample of linear features [REP2-038, para. 5.3.31]. Highways England continues to develop the mitigation strategy in consultation with HMAG and with inputs from the Scientific Committee to identify mitigation measures that are reasonable and proportionate to the significance of the heritage assets likely to be encountered, based on the results of the comprehensive archaeological evaluation programme that has been completed.
13.1.18	**CH.1.44:** The statement that the Avenue would be unaffected by the scheme is patently wrong. Its being grassed over (and potentially readily marked out by mowing, or even by partial restoration of or replication of its banks) would mean that it could (in principle) be better experienced in terms of following its course; but this would be at least partially offset by the excavation of a substantial cutting and creation of the E tunnel portal in the side of the ridge not far from it. This impact on its setting and how	To clarify, Highways England's response to Written Question CH.1.44 [REP2-025] states that "The location **where the Avenue crosses Stonehenge Road north of West Amesbury** is outside of the order limits (by approximately 90m) and will therefore be unaffected by the Scheme", that is, no mainline surface cuttings, groundworks etc. will have a direct physical impact on the Avenue. Adverse and beneficial Scheme impacts and effects on the Avenue and its setting are assessed in ES Chapter 6, Cultural Heritage [APP-044] and the Heritage Impact Assessment [APP-195]. With regard to temporary construction phase impacts, the ES notes that "Construction of the eastern portal and its approach

	that would be experienced (another case of the OUV relationship between monuments and the landscape) has not been identified or assessed.	road would be apparent from some monument groups, for example in vicinity of the King Barrows (AG26), the Avenue Barrows (AG30), The Avenue (AG27), the Coneybury group (AG29), the Countess Farm Barrows (AG31) and Vespasian's Camp. Impacts here are fairly limited, either because of the separating distance, the dominating presence of the existing A303, the low baseline quality of the setting, intervening topography or vegetation, or a combination of these factors. A Slight adverse effect is assessed for all of these assets, derived from a Negligible impact on Very High value assets." [APP-044, para. 6.9.19]. The Setting Assessment [APP-218, pages 66–7] notes with regard to permanent construction phase impacts: "The removal of the A303 surface road would have substantial beneficial impacts on the setting of the monument and its integrity as a key component of the WHS [...] The effect of the Scheme would be Large beneficial (derived from a Moderate impact on a Very High value asset)." In operation, "The eastern portal location would be concealed within the landscape at the head of a deep dry valley (combe) and by a short length of canopy, thus concealing the portal in views from the Avenue, King Barrow Ridge and the Countess Farm barrows." [APP-044, para. 6-50]. Large beneficial effects are assessed on the Very High value Avenue (AG27), arising from the positive impacts of reduced visual impact of roads and associated infrastructure and restored or enhanced sightlines with other monument groups [APP-044, para. 6.9.27; Table 6.11: Summary of significant effects – construction (permanent) & Table 6.12: Summary of significant effects – operation (permanent)]. The Setting Assessment [APP-218, pages 66–7] notes with regard to permanent operational phase impacts: "The visual and aural impact of traffic would be removed to a very large degree, though traffic would remain visible in longitudinal eastward views of the Scheme. The effect of the Scheme would be Large beneficial (derived from a Moderate impact on a Very High value asset)." The HIA [APP-195], in the Summary of assessment of impact and effects, notes that the proposed scheme would result in a Moderate Positive Change to its setting, resulting in a large beneficial effect on an asset group conveying attributes of OUV. The HIA notes that "The removal of the A303 surface road would have substantial beneficial impacts on the setting of the monument, and its integrity as a key component of the WHS" [APP-195, pages 354–5], The Scheme will facilitate the reconnection of The Avenue where it is currently severed by the existing A303. Further reconnection and making it fully accessible

		falls outside the scope of the Scheme. Highways England is working with the relevant stakeholders to identify opportunities for legacy benefits, such as improving footpaths along the river, to be pursued by other means.
13.1.19	**CH.1.50:** As noted above, the need for co-ordination of archaeological and soils Method Statements and the DCO provisions for return of temporarily acquired land to agriculture is critical to achieving the proposed archaeological mitigation for very substantial areas, some of them – such as the area around the Winterborne Stoke Barrow Group – of significant sensitivity (as we have noted in our comments on the fieldwork evaluation reports). HE's response gives no indication of how this is to be achieved since the soil handling and archaeological *in situ* preservation requirements are in potentially serious conflict that has nowhere been resolved in the documents submitted. It is NOT at all clear that archaeological preservation would take precedence, as is implicit in the stated fall-back position of undertaking additional investigations if preservation *in situ* cannot be achieved. Given the high importance put on preservation of soils and their careful handling (as required by DEFRA's *Construction Code of Practice for the Sustainable Use of Soils on Construction Sites* and several BSI standards) it seems unlikely that archaeological considerations would take precedence. The statement on soil handling for HS2 for example[1] makes no mention of archaeology and states "*Where construction sites and haul routes are returned to agriculture this will require loosening of the subsoil prior to topsoil placement. Following restoration, affected areas will enter into a period of aftercare of up to 5 years, and agricultural underdrainage may be required*." The response gives no indication of how specialists and government/local government/statutory agencies responsible for covering different fields will be involved in a co-ordinated way.	See the Applicant's written summary of its oral submissions made in relation to agenda item 7 of ISH2, submitted at Deadline 4. At that hearing, the Applicant explained that the draft development consent order includes requirements for the Applicant to comply with the Outline Environment Management Plan (OEMP) and Detailed Archaeological Mitigation Strategy (DAMS), both of which are approved by the Secretary of State and would be certified documents. As a result, any soil management strategy (prepared pursuant to the OEMP) could not contain any provision that conflicted with the approach in the DAMS, as that would mean compliance with the DAMS could not be achieved in accordance with the DCO requirement. Similarly, given the provisions for compliance with method statements and strategies prepared pursuant to the DAMS and OEMP (which includes archaeological method statements), a situation would not arise where those subordinate documents were conflicting, as that situation would then not allow for the conflicting documents to be implemented, as required by the requirements of the DCO or the provisions of the DAMS and OEMP. The draft DAMS [REP2-038] sets out the principles for preservation in situ in paragraphs 5.2.4–6. Appendix D identifies the areas where this is proposed. As the draft DAMS is an evolving document, in some cases preservation in situ is stated as the preferred option while acknowledging the need for archaeological excavation and recording where preservation in situ cannot be achieved. This is intended to reflect the fact that discussions with HMAG members to agree a reasonable and proportionate mitigation programme are ongoing. With regard to soil handling protocols, the OEMP [REP3-006, Table 3.2b REAC tables for the main works, item MW-GEO3] already states, "The main works contractor shall follow the guidance in Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (2009) when handling agricultural soils and in particular the land to be reprofiled for use as permanent chalk grassland." This requirement applies to the handling of soils in areas where preservation in situ is proposed beneath landscape fill. The Heritage Management Plans (HMP) and Method Statements to be prepared by the main contractor will bring together the requirements of the OEMP and the DAMS. The OEMP requires all works to be undertaken in accordance with the DAMS [APP-

		197, MW-CH2]: this requirement gives the necessary precedence to archaeological considerations. The Archaeological Clerk of Works will be responsible for overseeing implementation of the DAMS requirements on site. As explained at the issue specific hearings, the soil management strategy would take cognisance of any archaeological considerations, as required by the DAMS. In addition, Item MW-GEO7 of the OEMP then sets out what the main works contractor must develop to form part of the soil management strategy. This includes: "*Soils Handling Strategy, with reference to BS3882: 2015 Specification for Topsoil and the Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Site. This shall* ***incorporate the soils handling measures outlined within the DAMS****, identify locations where archaeological in-situ preservation is required and consider areas to be returned to agricultural use* […]" (words in bold have been added to the OEMP for Deadline 4, to spell out for the avoidance of doubt the compatibility between the OEMP and DAMS). This is further bolstered by the new paragraph 5.2.11 in the updated DAMS submitted at Deadline 4. Further detail in terms of soil restoration following temporary works is set out above, item 13.1.2, in relation to Written Question CH.1.3. With regard to consultation and sign-off of HMPs and Method Statements, the DAMS sets out the reporting lines for these [REP2-038, Appendix A - Communications Strategy: Flowcharts]. Highways England acknowledges the need for a clear procedure in terms of the involvement in the various approvals and sign-offs provided for by the DAMS of the relevant statutory bodies, heritage stakeholders and specialists. Highways England continues to engage with those bodies to ensure this is clear within the DAMS.
13.1.20	**CH.1.52:** The response does not fully address the risks related to unforeseen finds. *First,* as explained in our main statement and observations on fieldwork results there are inherent uncertainties in the evaluation fieldwork sampling methods used in relation to the likelihood of key complex	See the Applicant's written summary of oral submissions made in relation to agenda items 7 (i and ii) of ISH2 regarding the Detailed Archaeological Mitigation Strategy (DAMS), submitted at Deadline 4. The approach to unexpected finds made during the preliminary works or main works stages is set out at paragraphs 5.1.15 to 5.1.17 of the draft DAMS submitted at Deadline 2 [REP2-038]. The procedure for dealing properly with any unexpected finds during the construction process (preliminary or main works) will be agreed with by the contractor and Highways England and recorded in the

	archaeological remains of types known to occur in the WHS but intrinsically difficult to locate by geophysics – or locatable but not evaluated – having being found (for example complex burial deposits; ritualistic deposits; ritual wells/shafts). Geophysics has been very poor at identifying small but complex archaeological remains such as human burials not marked by ditched monuments. Only a tiny proportion of potential archaeological remains identified by geophysical survey have been tested by trenching. *Second,* the extent of trenched evaluation has been limited within the scheme boundaries and any significant redesign or adjustment of alignments could alter the location of impacts, but there is no clear provision for evaluating the implications of such changes (we noted the case of the A419/A417 scheme where such a design modification led to a major reprogramming of construction). *Third,* as discussed above there is very significant uncertainty regarding the deliverability of the preservation *in situ* proposals for temporary work areas given soil handling requirements. This raises further major uncertainties in respect of unforeseen archaeology turning up in areas not fully evaluated. This is especially significant since the establishment of temporary works areas are likely to be on the critical path for commencement of works. The response does not address these matters, and in particular does not demonstrate that there is no risk of significant discoveries requiring lengthy investigation on the critical path for construction works. It is not clear when or how *'a minimum period of time to deal properly with any unexpected finds'* would be defined, but it is assumed only after the discovery has been made. It will be noted that this is to be a matter for Highways England and the Contractor to agree, both of whom will be under very significant pressure to deliver the project on time and in particular not to delay the start of tunnelling. It appears that there is no provision for curatorial oversight of this by Historic England, WACS or HMAG.	Construction Environmental Management Plan (CEMP) (as required by the OEMP [REP3-006]). If unexpected finds are made during the construction a site consultation meeting(s) will be convened between the Archaeological Contractor, HMAG/ WCAS and the Technical Partner's Archaeologist (TPA) to consider the significance of the find, and depending on the outcome of the consultation meeting, an addendum to the Site Specific Written Scheme of Investigation (SSWSI) or a new SSWSI will be prepared by the Archaeological Contractor in consultation with HMAG/ WCAS. The DAMS and OEMP will be secured as Requirements of the DCO. These Requirements will commit Highways England to delivering the required archaeological works. The Applicant considers that the DAMS and OEMP as drafted provide the necessary controls to ensure that unexpected discoveries are dealt with properly. The Applicant does not consider that any specific contingency provision is required, or can reasonably be made, in the DAMS or the OEMP regarding the resources required to deal with unexpected discoveries. Highways England also stated in their response to Written Question CH.1.52(i) paragraph 2 [REP2-025] that 'The majority of archaeological works are being undertaken in the Preliminary Works phase to mitigate against the risk of unforeseen finds being located within the Main Works. Archaeological remains would be excavated and recorded during the Preliminary Works phase, in advance of construction, to avoid, as far as is practicable, previously unknown archaeological remains being uncovered during construction.' With regard to uncertainties in the evaluation fieldwork, please refer to Section 21.4 of Highways England's Comments on Written Representations [REP3-013] which describes the full and comprehensive programme of archaeological evaluation surveys undertaken to inform the ES and HIA (para. 21.4.2), appropriate sampling (paras. 21.4.7; 21.4.30; 21.4.67), serious consideration of previous discoveries (para. 21.4.3), exhaustive identification of Scheme impacts (para. 21.4.4), potentially significant small features (paras. 21.4.67-21.4.74) and full appreciation and understanding of the importance of the WHS and its OUV (para. 21.4.5). Wiltshire Council confirmed at ISH2 that the archaeological evaluation is considered comprehensive. The DAMS applies to the scheme as applied for, therefore it applies in full to the detailed design, within the parameters of the scheme as applied for, no matter what that detailed design is. There is therefore no 'contingency' required for changes to detailed design. The detailed design must be within the consented

	Taken together, especially in view of the types of archaeology likely to be encountered that contribute to the OUV of the WHS and the archaeology of other parts of the scheme, this leaves a high risk of archaeology being compromised and/or construction schedule being disrupted unless major time contingencies are made for early, archaeologically-controlled stripping of all areas of landtake not guaranteed to be preserved *in situ.* At present these seem likely to be only areas of mounding where topsoil is left in place and material dumped from on top of previously dumped material (cf *DMRB* Vol 10 Section 1 Chapter 6 6.3). The draft DAMS does not adequately provide for this, and no timescales have been indicated.	parameters and the DAMS is designed to apply to the Scheme within those parameters. With regard to the deliverability of preservation in situ, please see the Applicant's written summary of its oral submissions made in relation to agenda items 7 (i and ii) of ISH2 regarding the DAMS submitted at Deadline 4. With respect to soil handling and its interface with archaeological mitigation, see also the responses above in relation to Written Questions CH.1.3 and CH.1.50. It is considered that unacceptable impacts would be avoided by the implementation of the measures in the DAMS. Development of the DAMS will address the technical requirements to achieve the desired mitigation for the measures mentioned in the written submission and in consultation with HMAG, Historic England and WCAS and inputs from the Scientific Committee.
13.1.21	**G.1.2:** Highway's England's response misrepresents the situation, which warrants further comment. The NNNPS is general ***policy*** (based closely on NPPF) for balancing different public interests applicable to all network infrastructure: it is not a plan or programme and no more *'sets the framework'* than the NPPF does for local development plans – which clearly ARE subject to SEA because they DO set the framework for what development is proposed for an area. The key issue at stake here is not the *policies* against which *any* scheme must be judged, but whether there are higher level plans or programmes of development of which the project forms part, and which, like a local development plan *'set the framework'* within which decisions are reached. What this phrase means has been set out by the Supreme Court in the following terms: *The purpose of SEA is to ensure that the decision on development consent is not affected by earlier plans which through the framework, the rules or criteria or policies they contain, weigh one way or another against the application when the earlier plans have not themselves been assessed for likely significant environmental effects. The significant environmental effects have to be assessed at a time when they can play their full part in the decision; they cannot be left*	The Applicant refers to its comments on the CBA's written representation in paragraph 21.1.16 [REP3-013]. As stated in that response, the Road Investment Strategy (RIS) does not set the framework for future development consent of projects and does not prevent environmental effects being taken into account at the development consent stage, nor does it constrain the decision whether or not to grant development consent. The RIS is therefore not a plan or programme requiring a strategic environmental assessment (SEA). This is further made clear from the extracts of the Supreme Court's decision in relation to HS2 cited by CBA; the RIS does not affect the decision whether to grant development consent for the Scheme because it does not impose a framework, rules, criteria or policies which weigh one way or another against the application. Further, the process currently underway of the consideration of the Scheme, facilitates the environmental effects of the Scheme being assessed and considered at a time when they can play their full part in the decision. Indeed, the large part of the National Policy Statement for National Networks (NPSNN) – which has been subject to strategic environmental assessment in the form of the Appraisal of Sustainability accompanying it - is occupied with setting out the environmental effects that must be assessed and which effects are acceptable if the Scheme is to be granted development consent by the Secretary of State and which effects are not. The Examining Authority and Secretary of State are required to determine whether to grant consent for the Scheme pursuant to section 104 of the Planning Act 2008. As a result of those provisions, the decision maker must decide the application in accordance with the NPSNN. In addition to the terms of the NNNPS

	unassessed so that the development decision is made when the framework in the plan has sold the pass. A plan framework tilts the balance, creates presumptions, and urges weight to be given to various factors." (Supreme Court [2014] UKSC 3 on appeal from: [2013] EWCA Civ 920 etc) This can readily be judged from the project level perspective on the basis of whether or not – in the terms set out above – the Examination Panel need to have any regard to the hierarchy of road investment delivery plans and programmes of which this project is part (cf Examination Question AL.1.5). Various documents before the Examination indicate that such plans DO *tilt the balance, create presumptions, and urge weight to be given to various factors*. But it can also be judged from a national perspective on the decision-making hierarchy of plans and programmes, including whether in cascading decisions down the hierarchy decisions are made in ways that key environmental effects and how they might be best be avoided or reduced have been left unassessed so that the development decision has been left to be made when the framework in the plan has already set parameters that hinder or prevent those effects from being addressed. The Applicant's answer to Question AL.1.6 clearly suggests that despite s.3(5) and s.5(2) of the Infrastructure Act schemes and options are included in or excluded from the RIS on budget considerations that did not include environmental considerations – and thereby in various respects have already *'sold the pass'* (or at least are in danger of doing so). The CBA's case is that both perspectives apply, and we have already set out the detailed analysis to demonstrate why the Road Investment Strategy and its subsets does fall within the ambit of SEA. If SEA requirements did not apply at that level then they would apply at the regional or route specific level. Under the Infrastructure Act 2015 the Secretary of State and Highways England have a statutory duty to have regard *'in particular'*	itself on environmental effects (referred to above), that requirement is subject to certain exceptions, including under section 104(7) which requires that the application should be determined in accordance with the NPSNN unless the adverse impact of the proposed development would outweigh its benefits. This requires a balancing exercise to be undertaken of the adverse and beneficial impacts of the Scheme. The environmental effects of the Scheme are relevant to that balancing exercise, and in this way play their full part in the decision. The Applicant's position is that it is also clear from the decision-making framework set up by section 104 that the NPSNN does impose rules or criteria in relation to the consideration of the Scheme. The Applicant therefore disagrees with CBA's interpretation of the NPSNN in this respect. In terms of the assertion that various documents before the Examination indicate that various road investment delivery plans and programmes "tilt the balance, create presumptions, and urge weight to be given to various factors", the CBA has failed to demonstrate this point. Whilst the RIS is referred to in documents submitted by the Applicant to the Examination, this has only been to demonstrate that there is need and support for, and commitment to, the Scheme. That does not equate to the decision maker's decision whether to grant development consent now being constrained by the RIS because it identifies the Scheme as being necessary and having Government support. The terms of S104 make it clear that it is the NNNPS that forms that constraint, and it has been subject to SEA. Indeed, the RIS (2015-2020) notes (in the context of feasibility studies undertaken including in relation to the A303/A30/A358 corridor) that *"Delivery [of proposals identified in the investment package] will require the successful completion of the necessary statutory planning process and the continued development of business cases and demonstration of value for money."*

to the effects of their proposals on the environment (the SofS in respect of the RIS and Route Strategies under s.3(5); HE in respect of ALL their functions under s.5(2)). From the informal comment by way of response (rather than formal screening assessment or legal opinion) it would appear that despite their statutory duties there has not been any formal screening for SEA in accordance with the SEA Regulations, nor has counsel's opinion been sought.

DMRB Volume 11 (Section 2 Part 1 HA 201/08 3. Environmental Impact Assessment and Strategic Environmental Assessment) states:

> *3.1 Strategic Environmental Assessment (SEA) is undertaken for certain plans or programmes….. SEA may therefore precede and set the framework for projects that are subject to statutory Environmental Impact Assessment (EIA).*
>
> *3.6 In England and Northern Ireland, detailed guidance on the SEA process for transport plans and programmes is provided by WebTAG Unit 2.11 www.webtag.org.uk.*

WebTAG Unit 2.11 (http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.395.6630&rep=rep1&type=pdf) does appears to have been removed from the current online version of WebTag where – as far as we can tell – no mention at all is made of SEA. But Unit 2.11 is still referred to in the DMRB and what it shows is that the SEA requirements are greater than the provisions of standard appraisal. It specifically makes clear that –

> *1.1.5 This guidance is not intended as an interpretation of the law. It provides a basis for undertaking SEA, but is no substitute for giving careful thought to developing the approach to the SEA of the particular plan. It should be read in conjunction with the Directive and transposing legislation.*

2.2.5 …..Enhancing the NATA to fulfil the requirements of the SEA Directive requires additional work on:

- *collecting baseline environmental information and identifying environmental problems;*
- *predicting the significant environmental effects of the plan;*
- *identifying mitigation;*
- *identifying alternatives and their effects;*
- *consulting the public and authorities with environmental responsibilities;*
- *reporting how the results of the SEA and consultation responses have been taken into account;*
- *providing a non-technical summary of the SEA; and*
- *monitoring the actual environmental effects of the plan during its implementation.*

As explained in our main statement (**REP2-070**), we believe that taken as a whole the Road Investment Strategy is very much in danger of *'selling the pass'* in terms of whether the effects of the overall Strategy best enhances and avoids damage to internationally and nationally protected areas and sites and to what extent any unavoidable landscapes or sites harm may be prevented reduced or offset. It thus seems clear that the high-level appraisals that have been done do not meet the requirements of SEA as indicated above.

If applied properly to the whole RIS (which is where the hierarchical framework starts) SEA might well not be needed at lower tiers in the hierarchy, but this depends a great deal on how far proposals for regions and for strategic routes are further developed and options

	identified not covered by a higher level SEA. In such circumstances SEA may also be needed at lower levels as suggested by the Stonehenge Alliance. This is illustrated by the Scottish Government's SEA of their overall national Transport Plan and subsequent SEAs of particular multi-project highways improvement schemes such as those for the A9 and A96. Highways England's statement that *"the 'south-west corridor' proposal, although called a programme in some literature, is not a plan or programme within the meaning of the SEA Directive"* is an unsubstantiated assertion, not supported by any screening analysis. The default position is that if in the terms of the Supreme Court HS2 ruling (and others) a document sets out a series of developments that come within the ambit of the EIA procedures and thereby sets the framework for subsequent decision-making, SEA is required unless excluded by the exceptions included by the Regulations (see details in **REP2-078** CBA's Written Statement Appendix G). Both in general as proponents of developments that come within the ambit of EIA regulations, and specifically in respect of their statutory duties to have special regard to the effects of the RIS and its delivery on the environment, the onus is on the Applicant and or the Secretary of State to apply SEA where legally required. Until a legally valid screening analysis supported by counsel's opinion is presented by the applicant, we would respectfully suggest that the Examination Panel should not accept the Applicant's unsubstantiated assertions as providing an adequate response on this issue.	
13.1.22	**CH.1.61, AI.1.11 and AI.1.12:** The whole process of comparison of alternatives has in effect started from a presumption that a tunnel beneath the central part of the WHS with surface dualling in cuttings and grade- separated junctions immediately outside the WHS but still within its setting and OUV would be the best solution to be compared with other options. A more objective approach would have been to consider each corridor as a surface route that needed to avoid and minimise impacts on internationally and	Proposals for the improvement of the A303 between Amesbury and Berwick Down have been the subject of extensive study and consultation since 1991. The process of options identification and route selection leading to the Scheme is summarised in the Case for the Scheme [APP-294], Section 3.2 and in Chapter 3 of the ES, Assessment of Alternatives [APP-041]. As detailed in the response Written Question AL.1.4 [REP2-024], the Scheme Assessment Report (SAR), [REP1-023] and Technical Appraisal Report (TAR), [REP1-031] were compiled by the Applicant to describe and explain the process of options appraisal which led to the identification of the preferred route. This

	nationally protected landscapes and sites, using structural solutions such as tunnels where appropriate, thereby optimising the balance to be struck between traffic, economic social and environmental effects. Thus the assessment of Route Option F010 has clearly been done on the basis of raw data without the benefit of any significant adjustment of route alignment, landscaping or other forms of avoiding or minimising impact. This has badly skewed the assessment, exaggerating the raw impacts as being incapable of mitigation or being offset by benefits elsewhere. The result is that a completely different standard has been applied to option F010 as compared with normal practice: in effect the key environmental justification for longest highways tunnel in the UK (at 3.3km almost double the next longest at Hindhead 1.83km) is not to deliver what even by the applicant's assessment is only a marginal benefit to the WHS, but to avoid crossing unspoilt countryside that may be of relatively high quality but is not designated as such. Were this standard to be applied even to protected landscapes it would be a marked departure from standard practice – and indeed (as we have explained) is being pursued here at the expense of severe unavoidable impacts to protected landscapes elsewhere. The basic statement in the assessment report about the Corridor F is a fair statement of the situation: *Corridor F surface route options to the south of the WHS would remove the A303 from the WHS in its entirety. This would bring substantial benefits by reducing severance and improving the setting of key assets, including the Stonehenge monument. These benefits would need to be balanced against adverse environmental effects of constructing a longer route within a high quality, unspoilt landscape with the associated loss of habitats.* *Surface route options to the south of the WHS would also offer a less direct route for through traffic and would therefore offer reduced*	process followed Highways England's Project Control Framework (PCF) which is an established staged process starting with problem and opportunities identification (Stage 0), options identification (Stage 1) (see Chapter 5, Page 72, TAR [REP1-031]), and options appraisal (Stage 2) (see Chapter 6, page 98, SAR [REP1-023]). As explained in paragraph 5.2.2 of the TAR [REP1-031], sifting of options includes recognition of any 'showstoppers' that would prevent an option being taken forward. This meant that full surface routes were not considered for corridor D. Detail of the consideration given to Corridor F and in particular to Route Option F010 are recorded in the Technical Appraisal Report (TAR) [REP1-031]. The reasons behind decisions taken at each step of the option identification and selection process are given in the Applicants response to Written Question AL.1.10-13 [REP2-024] The assessment conclusions regarding route F010 are summarised in Table 3.1, Stage 4 of Chapter 3 of the Environmental Statement [APP-041] which states that, *"on balance, tunnel options D061 and D062 performed better than option F010 in terms of the assessed impacts. Key differentiators were F010 being a significantly longer route which would pass through a largely unspoilt, high quality, tranquil landscape with an additional crossing of the River Avon Special Area of Conservation (SAC). It would have a much larger footprint and a greater overall environmental impact, despite having greater benefits for the WHS. There would be disbenefits for road users having to travel on a longer F010 route, offsetting lower construction costs. F010 would also not interact effectively with the local road network, leaving higher levels of rat-running traffic adversely affecting the quality of life in local communities."* The options identification and selection process used for the scheme is summarised in the Case for the Scheme [APP-294] and further explained in the Scheme Assessment Report (SAR), [REP1-023] and Technical Appraisal Report (TAR), [REP1-031]. These documents describe how all options under consideration at any stage were developed to the same level of detail prior to application of the relevant sift and further development.

	transport benefits. More traffic would also remain or divert onto local roads, giving rise to adverse impacts on local villages and communities. he issue is thus how the balance is to be struck and that means considering more carefully how the downsides of Corridor F could be addressed. As far as we can see, this has not been attempted, but it is only by doing so in relation to routes, how serious the effects might be along different sections and how they might be adjusted and significant effects addressed that a proper comparison can be made. The following points, based on HE's assessment of Option F010 illustrates the issue. Landscape: It is stated that *'Overall it is considered that this 21.5km route would affect the landscape as a result of Very Large Adverse impacts identified on the Upper Avon Narrow Chalk River Valley and Large Adverse impacts identified on the Larkhill and Winterbourne Chalk Downland and Till Narrow Chalk River Valley Landscape Character Areas.'* These areas of greatest impact appear to affect about 50% of the route; none of which is within a nationally protected landscape. It is further stated that "This includes the introduction of a highly visual and intrusive feature as the route is elevated and aligned against the grain of the existing landscape." However, the vertical alignment of the route is not given, nor are any contours so it is not possible to assess these assertions against actual data, but the indicative cuttings and embankments relative to chainage give some indication of topographical 'fit' as the field boundaries do for historic character: • W of R. Till *Ch. 0-3,000*: modest cut and fill; opportunity for false cutting if necessary; existing vegetation variable • R Till and E side of valley *Ch. 3,000-4,750*: modest fill, long embankment so potential need for false cutting and planting; existing vegetation relatively good. An alignment swinging S might fit better into the valley side • Downland between Till and Avon Valleys *Ch. 4,750-8000*: minor cut and fill; good fit with topography and fields; parallel alignment further S (ie further from WHS) potentially similar	This iterative process of option development and selection is detailed in the TAR [REP1-031] which records the following decisions: <u>Design Fix A</u> Route Corridor F (Surface route options to the south of WHS) was selected as one of two surface route options to be taken forward (see TAR Chapter 5). <u>Design Fix B</u> The 13 historic route options were rationalised and the most viable options for western, central and eastern sections of the corridor were linked to form route options F010, F011 and F012 which were taken forward for further assessment along with 7 routes in Corridor D (see TAR Chapter 6). <u>Design Fix C</u> The ten routes identified in Design Fix B were then subjected to a more detailed appraisal and optimisation based on: • Strategic Fit with policies and with the Client Scheme Requirements. • Value for Money, including social and environmental impacts • Financial Case, or affordability of each options. • Delivery Case, or qualitative assessment of Stakeholder/Public acceptability • Commercial Case, including consideration of possible procurement options and level of risk Route option F010 was assessed as the best performing option in Corridor F and was taken forward along with route options D001 and D002 for further development (see TAR Chapter 7). <u>Route Optimisation</u> The three route options were further developed and optimised to a similar level of detail which included preliminary assessment of junction strategy, lighting, utilities, structures, public rights of way, tunnel design, earthworks, drainage and buildability (see TAR Chapter 8).

	• Avon valley and its upper sides *Ch. 8,000-10,250*: Key valley with villages along base. Potential to adjust horizontal alignment to minimise proximity to properties (c. 300m distant?) Key challenge dependent on length, height and design of assumed viaduct over valley floor (a tunnel beneath could be considered but vertical alignment and tunnel gradients would be challenging); potential for cutting/false cutting approaches with short embankments and relatively long architecturally designed viaduct with noise mitigation. The extract DMRB Vol 10 (Section 1 Part 1 Chapter 9, Crossing Valleys) below illustrates the example of the A66 dual carriageway crossing a narrow sinuous valley NW of Keswick in the Lake District National Park (Google Earth image added to show context) • E of Avon valley *Ch. 10,250-10,750*: Sidelong ground up a coombe in E side of Avon valley: moderate fit topography (half cutting) possible scope for split carriageway; moderately good fit with fields; moderate vegetation; modern factory buildings to S • Boscombe Down West *Ch10,750-14,600:* Very good fit with topography few properties (slight false cutting planting would help screen). Bad fit with historic fields, loop round S end of Boscombe Down Airfield adds significant length and problems with side of Bourne Valley. Consideration could be given to alignment outside airfield S of main runaway crossing beneath it in tunnel under S half of shorter runway (S of or possibly relocating part of solar farm). • Bourne Valley and S end of Airfield *Ch. 14,600-17,500:* Proximity of airfield detracts from landscape quality and tranquillity. Poor fit with topography cuttings and embankment intruding on upper edge of Bourne valley: vertical alignment could be lowered or false cuttings/recontouring to disguise route. • Boscombe Down East *Ch. 17,500-21,500:* Possible point where option beneath S runway would rejoin F010 to end; good fit with topography minor cut and fill (cutting past rare breeds centre at NE and would provide some screening); poor fit with generally undistinguished fields requiring detailed alignment adjustments	<u>Further WebTag Assessment</u> The final step in the Option Identification Stage was a more detailed WebTAG assessment and appraisal on the three best performing route options. Detail of this step is summarised in ES chapter 3, table 3.1 (in the entries labelled as Stage 4) and detailed in Chapters 9 to 18 of the TAR [REP1-031]. Chapter 18 records the appropriately proportionate assessment of environmental matters at this stage. The TAR also includes an overall appraisal summary in tables 20.4 and 20.5, Chapter 20. Further detail and signposting to the decision not to progress route option F010 is provided in Highways England's response to Written Questions AL.1.11 and AL.1.12 [REP2-024]. The option identification and selection process was also outlined, at ISH6 regarding Traffic and Transportation under agenda item 7: Assessment of Other Suggested Routes, 7.1 Route F010 – through Upper Woodford Valley.

	possible truncated corners of fields for planting to break up views of scheme. Overall Comment: While c. 2.75km crossing the Avon Valley and another c. 3km loop round the S end of Boscombe Down Airfield are significant problems of landscape 'fit' much of the remaining 15km of the F010 route presents few major problems in respect of landscape and there are design and landscaping techniques that would allow the impact to be minimised. The Avon Valley represents the most serious challenge but is quite comparable with other cases of crossing narrow valleys. Using a tunnel or tunnel and retained cutting to negotiate Boscombe Down Airfield and the S end of Amesbury could be seen in the context of roads that need to pass beneath civilian airports (which is not prevented by security risks) and or through urban areas, and in this context do not seem to present exceptional challenges. It is not at all clear that a 3.3km tunnel is needed to avoid these effects, but a much shorter tunnel would help to reduce local journey times and avoid harm to a third river valley. *Biodiversity:* If ecological impacts of the proposed scheme viaduct on the Till Valley can be prevented or reduced to an acceptable level the same would seem likely to be true of the Till valley S of Winterbourne Stoke and – unless demonstrably otherwise – the River Avon SAC. It is also not clear how far or why any impacts on designated sites not physically damaged by F010 would necessarily be any greater than those adjacent to the proposed scheme. While more hedgerows and woodland would doubtless be disturbed, the full effect of this relative to opportunities to mitigate such effects with green bridges and areas of habitat creation are a yet undefined. It is not at all clear that a 3.3km tunnel is needed to avoid these effects. *Heritage settings:* The impact on the setting of Ogbury Hillfort (c.500m away) would be less that the effect of existing A303 and proposed scheme on Vespasian's Camp (c.20m away) – which would be removed. Taking all the benefits of the proposed scheme for the setting of monuments at the heart of the WHS these would be retained by the alternative F010 while the additional benefits to the monuments at the E	

	and especially W side of the WHS would more than outweigh harm to the setting of many fewer monuments affected by F010. It is clear that a 3.3km tunnel as proposed is not only not needed to avoid these harmful effects, but would greatly increase them and greatly reduce the opportunity to achieve even more benefits. *WHS Setting:* The impact of F010 on the setting of the WHS could be reduced by adjusting the alignment further to the SW and potentially avoiding any need to have a grade separated junction immediately adjacent to the WHS as currently defined. It is clear that a 3.3km tunnel as proposed is not only not needed to avoid the potentially harmful effect of F010 in this respect, but would greatly increase them greatly reducing the opportunity to achieve even more benefits. *Archaeology:* F010 would not require the loss of any designated archaeology (either Scheduled Monuments or sites and deposits within the WHS that contribute to its OUV) and in part depending on any optimized alignment, would potentially have far less impact on archaeology contributing to OUV outside its boundaries. While it is very possible that more undesignated archaeology would be lost, it is far from clear without an equivalent level of fieldwork whether or not that would be the case, or what character and importance of site would be lost. Here again it is very far from clear why such losses would outweigh the greater direct benefits of reducing and entirely avoiding harm to monuments and sites that demonstrably contribute to the OUV of the WHS. This is especially unclear given the manifold uncertainties about the archaeological impacts of the prosed scheme and whether or not proposed preservation *in situ* is deliverable. It is not at all clear that a 3.3km tunnel is needed to avoid these effects. *Hydrology* It is far from clear that the hydrological implications of F010 would be any worse than the proposed scheme. It is not at all clear that a 3.3km tunnel is needed to avoid these effects. *The overall footprint* of alternative F010 is claimed to be very much larger because it is substantially longer; but this again is not a like-for like basis as it does not compare the hectarage of permanent and	

	temporary landtake, let alone the volumetric scale of the two schemes. It is likely that the effects of F010 would be worse for agriculture but it is not clear that this would be any worse than for any other roads scheme of comparable length. It is not at all clear that a 3.3km tunnel is needed to avoid these effects. *Communities:* The intrusive impact of F010 on communities in the Avon Valley would be a significant additional impact but it is not clear that this would be much worse than such effects of surface routes elsewhere, and there are opportunities to minimise this though very high quality design for the assume viaduct. It is not at all clear that a 3.3km tunnel is needed to avoid these effects. *Journey times and rat running and economic effects:* The impact of F010 would clearly be worse than the proposed scheme, but it is far from clear that a 3.3km tunnel is needed to avoid these effects. As indicated above a shortening of the route by c. 2-3km might be achieved by a much shorter tunnel beneath Boscombe Down airfield, and other traffic management measures and means of offsetting any adverse effects on the local economy would need to be considered. It is not clear that any consideration has been given to the potential additional benefits of longer stay visitors if complete removal of the A303 from the WHS led to its opening up as a major archaeological park.	
13.1.23	**Other alternatives and overall conclusion** From the above consideration of just one alternative scheme, it is evident that the consideration of alternatives (especially the southern surface route but others in similar manner) has not been made on a like-for-like basis or within the context of what is normally acceptable for road schemes. It is reasonable to give considerable weight to the desirability of removing the A303 from the WHS, but justifying only its partial removal to achieve at best only marginal net benefit (and at the cost of significant irreversible loss of its OUV) by means of a controversial contingency valuation study is of very dubious merit. There is no basis for this being	See response to item 13.1.22 set out above. **In summary,** the Applicant considers that the options appraisal undertaken is a full options appraisal and a proportionate consideration of alternatives, not only following the WebTAG and PCF processes normally used to assess road schemes, but going further during PCF Stage 1 by introducing additional stages in order to take account of the number of options requiring consideration. Refer to the HIA and to the items discussed in ISH2 dealing with matters relating to cultural heritage. The disadvantages of route F010, justification for the decision not to take the route forward to consultation and the weighting given to the different aspects of

	a standard methodology but has been applied simply to make a financial case for a flawed scheme, when in fact the issue is an environmental case under international treaty obligations which do not accommodate compromises based on this type of approach. Even if valid, it would make a substantially bigger value for money argument for a surface alternative avoiding the WHS altogether. Coupled with the larger differential between the cost of a 3.3km tunnel as compared with the 2.9km tunnel used in the original rejection of option F010, the cost and value for money case for preferring the proposed scheme over F010 is fundamentally flawed.	the route assessment are provided in Highways England's response to Written Question AL.1.12 [REP2-024].

14 National Trust (REP3-061)

14.1	Comments on Written Question responses	
	Matter Raised	**Highways England's Response**
14.1.1	De.1 (general) The Trust welcomes the Applicant's recognition that key stakeholders need to be consulted on areas of detailed design. Discussions are ongoing on how best to achieve this through the Requirements and other control documents, including the draft OEMP to be submitted at D3, and we will therefore need to review that.	The latest position on these matters is set out in the written oral submissions for ISH4, ISH5 and ISH6 submitted at Deadline 4, and the updated Outline Environmental Management Plan submitted to the same deadline.
14.1.2	Ec.1.5 (page 7-12) We seek additional confirmation whether the ecological functionality of the bat roosts can be maintained during and post construction, based on the combined impact of the construction of the proposed flyover and the removal of a (as yet unspecified) number of trees between the Countess Farm Complex and the A303.	See response to items 20.5.30 and 20.5.31 in the Comments on Written Representations [REP3-013] and response to item 4.9 in Deadline 2 Submission - 8.5 Statement of Common Ground - National Trust [REP2-015].
14.1.3	Ec.1.7, (3) (page 7-15) It is not clear how the achievement of the target purpose will be assessed and the criteria by which it will be measured through to any handover. Confirmation that the criteria for all habitat assessments will be included in the LEMP is sought	It is anticipated that criteria for target habitats will be included in the detailed landscaping scheme to be submitted for approval under Requirement 8 of the DCO, which must reflect the mitigation measures contained in the Environmental Statement. The Contractor will also be required to develop a Landscape and Ecology Management Plan (LEMP) as stated in MW-LAN1 of the Outline Environmental Management Plan. It is anticipated that these would detail what successful habitat creation would be (likely to include such criteria as percentage cover of target species, general sward height etc.) and management measures to be undertaken should the habitats not reach these criteria, as described within the OLEMP [APP-267]. Item MW-G11 in the OEMP contains the obligations in relation to the Handover Environmental Management Plan ("HEMP") which will be based on the LEMP,

		amongst other things. This will be implemented by the body responsible for the long-term management of the operational Scheme. The HEMP shall be completed prior to the handover of the phase of the Scheme concerned.
14.1.4	Ec.1.10 (page 7-18) A replacement area will only compensate for the loss of the cutting if similar chalk grassland is recreated comprising of the same open sward and species composition. Description of the target purpose chalk grassland type including species composition and desired sward height should be included in the LEMP to ensure adequate satisfactory ecological compensation is provided.	As detailed within paragraph 8.1.13 within the baseline evaluation Appendix [APP-233], Countess Cutting CWS was identified as CG3 *Bromus erectus* grassland. The grassland is considered to be moderately species-rich and typified by abundant upright brome (*Bromopsis erecta*), salad burnet (*Poterium sanguisorba* subsp. *sanguisorba*), hawkweed (*Hieracium* sect. *Hieracium*) and locally, mouse-ear hawkweed (*Pilosella officinarum*). The target condition of calcareous grassland to be created as part of the Scheme will be detailed within the detailed landscaping scheme to be submitted for approval under Requirement 8 of the DCO, which must reflect the mitigation measures contained in the Environmental Statement. The Contractor will also be required to develop a Landscape and Ecology Management Plan (LEMP) as stated in MW-LAN1 of the Outline Environmental Management Plan. The objectives for habitat creation on the south-facing slope of the new cutting at the Eastern Portal would include habitat suitable for common reptile species and the gnaphosid spider (*Phaeocedus braccatus*) which have been recorded at the existing Countess Cutting as described in Chapter 8 of the Environmental Statement [APP-046], paragraph 8.9.92. This would be open sward chalk grassland, but with some diversity of structure and composition to provide cover for reptiles and invertebrates, e.g. by managing for a gradation of structure from the retained Nile Clumps and the inclusion of deadwood / leaf litter along the verges. The open mosaic habitat would be achieved by sparse use of topsoil on the cutting and selective seeding, an approach used on the Weymouth Relief Road, which is the approach described in paragraph 5.1.3 of the OLEMP [APP-267]. Principles of management are described in sections 7.1 and 7.2 of the OLEMP but details for this area specifically would be determined during detailed design. The OLEMP would be taken into account when the detailed landscaping scheme is developed, as referenced above.

14.1.5	DCO.1.2 (page 6) Due to the sensitivity of the area, some locations will not be appropriate for construction compounds. The Trust would expect the location of construction compounds should form part of the detailed design/CEMP consultation processes being developed with the Applicant.	Following discussions at the ISH4 on the Development Consent Order on 4 June 2019, the Outline Environmental Management Plan has been updated at Deadline 4 to set out the locations of the main and satellite construction compounds and to commit to them not being located in the WHS.
14.1.6	DCO.1.12 (iv) (page 29) The Trust does not see why the Applicant considers the proposed additional wording to the definition of maintain such a significant administrative burden when it states that the effects of undertaking maintenance have already been assessed within the ES	As is noted in the Applicant's response to DCO.1.12 [REP2-030] maintenance has been assessed in the ES and there is no justification for the administrative burden, irrespective of its magnitude, imposed by the suggested wording to the definition "maintain". Put simply, any additional wording is unnecessary.
14.1.7	DCO.1.20 – 1.29 (pages 36-58) The Trust would require consultation in the event the Applicant sought to rely on this power, it is the Trust's view that the appropriate way for this to be dealt with is through the Non-material Change application process.	Please see the Applicant's responses to Written Questions DCO.1.20 to DCO.1.29 [REP2-030]. The Applicant understands the National Trust to be referring to the 200m lateral deviation of the commencement point of Work No.1F and neighbouring works. As noted in those responses, this forms part of the Scheme for which the Applicant seeks development consent and has been assessed in the Environmental Statement. It is therefore unnecessary to use the non-material changes procedure for it to be exercised; it forms part of the Scheme, is assessed in the ES and will have been the subject of rigorous examination before any making of the Order. For that reason, it is unnecessary to also require consultation on its exercise. The Applicant has committed to consulting the National Trust, and other heritage stakeholders, on key aspects of the detailed design of the Scheme within the World Heritage Site (see section 4 of the OEMP [REP3-006]), as well as committing to a series of design principles and commitments.
14.1.8	DCO 1.80, (i) (page 115) The Trust does not consider that the ordinary meanings of these two words are as interchangeable as the Applicant seems to suggest. The dDCO should use the term 'in accordance with' which clearly requires the detailed design to conform to the plans referred to in Requirement 3.	Please see the Applicant's written summary of its oral submissions at ISH1 regarding the DCO under agenda item 4.2(iv).

14.1.9	DCO 1.80, (ii) (page 116) The Trust welcomes the Applicant's recognition that key stakeholders need to be consulted on areas of detailed design. Discussions are ongoing on how best to achieve this through the Requirements and other control documents, including the draft OEMP to be submitted at D3, and we will therefore need to review that.	Noted.
14.1.10	DCO 1.84 (page 124) Whilst we note the Applicant's intention to update the OEMP at D3 and we will therefore need to review that, the mitigation measures required to make the scheme acceptable should in general terms be secured much more clearly on the face of the dDCO.	Noted, the Applicant maintains the OEMP and DAMS, secured through requirements 4 and 5 respectively, remain the appropriate vehicles to secure mitigation for the Scheme.

14.2 Comments on Draft Detailed Archaeological Mitigation Strategy (DAMS)

	Matter Raised	Highways England's Response
14.2.1	Para 1.3.3: We would consider it appropriate for the inclusion of HMAG's and the Scientific Committee's Terms of Reference as an appendix within the DAMS (or reference to where they may be found elsewhere in the documentation), to ensure the roles and responsibilities of both groups are clear.	Highways England acknowledges the advisory role of HMAG. The Terms of Reference of both HMAG and the Scientific Committee are published at: http://www.a303scientificcommittee.org.uk/terms-of-reference The Terms of Reference will be signposted or included in an updated draft of the DAMS to be submitted at Deadline 4.
14.2.2	Para 2.2.3: The final bullet point within 2.2.3 requires clarification. The use of the word 'may' in this bullet point suggests that 'material' i.e. sites comprising artefact scatters of Neolithic and Bronze Age date do not necessarily contribute to the OUV of the WHS. However the Statement of Outstanding Universal Value for the WHS makes it clear that the 'physical remains' of all Neolithic and Bronze Age 'associated sites' within the WHS convey OUV. A correct appraisal of the significance of such sites is key to ensuring appropriate mitigation is secured. We would therefore suggest this paragraph is replaced by:	The artefact scatters were discussed at ISH2 in relation to agenda item 7 (i) & (ii) – please see the Applicant's written summary of oral submissions made at that hearing, submitted at Deadline 4. At that hearing, the Applicant acknowledged that appropriate mitigation would continue to be developed in the DAMS. The Applicant continues to discuss that and the appropriate wording of the DAMS with the Trust and the other members of HMAG.

	'Ploughzone artefact scatters of Neolithic or Early Bronze Age date have been identified at a number of sites, both within and adjacent to the WHS. Within the WHS these are considered to contribute to the OUV of the WHS as associated sites. And outside the WHS they may have the potential to contribute to the understanding of OUV of the WHS.'	
14.2.3	Para 3.3.66 & .67: We would request that mechanisms for controlling both surface and sub-surface access within the 'Tunnel Protection Zone' to be secured within the dDCO.	Clarification is sought from the National Trust on the requirements for controlling access at surface and sub-surface level within the 'Tunnel Protection Zone' and mechanisms that are requested in this case. Highways England is open to discussions on this.
14.2.4	Para 4.2.6: We seek clarification on what the tunnel movement monitoring stations referred to in the DAMS 4.2.6 comprise. Without this it is not possible to assess whether the proposed mitigation (4.2.7) is adequate or appropriate.	As stated in the draft DAMS [REP2-038, paragraph 4.2.6], tunnel movement monitoring stations would be placed on the surface above the 3.0km bored tunnel section. 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. Paragraph 4.2.7 of the draft DAMS [REP2-038] indicates the proposed mitigation response in respect of the tunnel movement monitoring stations: 'Targeted archaeological mitigation at these locations will include ploughzone artefact collection, archaeological excavation and recording and/ or archaeological topographic survey, as relevant.' With regard to the form of the installations, for baseline monitoring current assessments indicate that either INSAR (Satellite) Monitoring or a levelling (Robotic Total Station or GNSS) system would be appropriate for collecting data for the required frequency and accuracy. Monitoring during the main works will be driven by the construction methodology and programme of the tunnelling contractor and the level of assessed risk taking in to account any restrictions to be imposed on the amount of ground movement that is acceptable; a levelling system is considered more likely to be adopted by the main works contractor. Typical details for a levelling system would require the installation of a 25 mm diameter reinforced rod in to the ground. The length of the rod will be sufficient to guarantee the stability of the measurement point. This depends on the quality of the ground. To fix the rod to the ground the bottom 2/3 of the rod must be grouted in a 75 mm diameter hole. The top 1/3 will be protected by a 100-120mm

		diameter PVC tube filled with sand, and all together in a 200 – 250mm manhole that will be fixed in place with cement. See also the Applicant's written summary of oral submissions made at ISH2 in relation to cultural heritage on 6 June 2019 (submitted at Deadline 4) under the sub-heading DAMS paragraph 4.2.6. An updated draft DAMS will be submitted at Deadline 4.
14.2.5	Para 4.2.12: The scheme proposes that east of the junction with Stonehenge Road the existing A303 will be removed and laid to grass. However paragraph 4.2.12 of the draft DAMS fails to address this issue. This section includes the section of the old A303 that crosses the line of the Stonehenge Avenue. This will require separate consideration to ensure appropriate archaeological mitigation is put in place.	Comment noted. This requirement will be reflected in an updated draft DAMS to be submitted at Deadline 4.
14.2.6	Para 4.2.16: While paragraph 4.2.16 of the DAMS references diversions for water, power, fuel pipeline, and existing fibre optic cables, only the locations for power and fuel are shown in Figure 11.1. The proposed route corridor for water is shown on Figure 2.7 A-E of the ES, however no details of the proposed fibre optic corridor are show on either document. We ask for the applicant to submit a plan showing the proposed fibre optic cables corridor, as without this it is not possible to assess whether the proposed archaeological mitigation (Appendix E) is adequate or appropriate.	The draft DAMS [REP2-038] considers the mitigation requirements for the fuel pipeline and the temporary and permanent water and power connections in Appendix E (Sites 46 – 51), with the proposed mitigation corridors shown in more detail on the inset drawings therein. An updated draft DAMS to be submitted at Deadline 4 will include a revised Figure 11.1 and inset drawings to clarify the proposed mitigation in respect of utility connections and diversions, including the proposed fibre optic cable diversion proposals.

15 Lois Lloyd (REP3-079)

15.1	Response to Written Questions	
	Matter Raised	**Highways England's Response**
15.1.1	**Implications the tunnel development would have on Druidic and other spiritual connections to WHS Stonehenge** We Objected to the tunnel in particular whether it be from the physical assault on the landscape or the interruptions of the etheric and spiritual connectivity that exists there imprinted in the landscape from millenniums of human interaction with the area. We and others have noted the improved wellbeing that is gained from those that spend time there, especially those low in spirit and mentally at odds with the world.	See response to King Arthur Pendragon, item 3.2.2 in the Oral Submission Report [REP3-012], the response on page 11-15 of the Relevant Representations Report [AS-026] and the responses to Written Questions HW.1.14, HW.1.15 and HW.1.17 [REP2-032] submitted at Deadline 2.
15.1.2	**Loss of Religious/Sacred Amenity to Stonehenge if BOATs are restricted after A303 is grassed.** We are freely allowed to conduct these ceremonies within the adjacent National Trust lands that include the Avenue, Cursus, Barrows and other sacred sites. The Avenue area needs to be accessed via the droves, the Byways Open To All Traffic especially BOAT12 that have been gated in 2018 under Experimental TRO by Wiltshire Council and then reopened after privately funded recourse to the High Court.	See response to item 4.4.2 in the Oral Submission Report [REP3-012].
15.1.3	**Consequential Loss of Amenity to practice our spiritual faith by Gating or reduction to footpath/cycling status of BOATs affecting equitable access** Consequential to the tunnel build and grassing over of the A303 we would have Wiltshire implement the full WHS Management Plan of NO Public Vehicles on the WHS resulting in reduction of all BOATs to	See response to item 4.4.3 in the Oral Submission Report [REP3-012].

	restricted byways; a trial run of that via a gating of all BOATs happened in 2018 resulting in a High Court Approval for its removal but only after a crowdfunded Action by Trail Riders Fellowship. I have talked to all kinds of people that go to pay their respects as I do. Without access to the drove it becomes near impossible for me and many others, some who come from Scotland, Wales, all over the UK in order to fulfil their spiritual needs. They would ALL be excluded if the current plans go ahead.	
15.1.4	These plans will run over-budget, as these things always do. With the current uncertainty in our country I am appalled that such a short-sighted plan, a plan that will only push the congestion further down the A303, is considered anywhere near- viable.	See response to item 4.4.4 in the Oral Submission Report [REP3-012] and the Funding Statement [REP2-007] which indicates how the costs of the Scheme have been determined.
15.1.5	I have still pending a personal Complaint under the Equality Act lodged with the Equality Commission. This is in respect of the above noted prevention of amenity enjoyment and equitable access as described above when as a member of my Order and as an Archdruid with those responsibilities I was unable to attend any ceremony due to the gating period until overturned by the High Court on 21 December 2018. That EA Complaint of mine will be resurrected if Wiltshire Council reinstate its application for a Gating Order and prevention of vehicle access to any BOAT on the Wiltshire WHS. That may escalate with judicial reviews as indicated by other organisations.	See response to item 4.4.3 in the Oral Submission Report [REP3-012] and the Applicant's response to Written Question Tr.1.30 [REP2-036].

16 Rollo Maughfling (REP3-080, 081, 094)

16.1	Response to Written Question	
	Matter Raised	**Highways England's Response**
16.1.1	I wish to submit to the Inspectorate one document which summarises the particular issue of our (druidic) belief structure in relation to continued use of the Byways Open to All Traffic (BOATS) in and around the environs of Stonehenge; it is my response as Stonehenge Officer to the Council of British Druid Orders given to the Stonehenge Traffic Regulation Order Public Inquiry of 22/6/2011. This confirms the first part of my colleague Arthur Pendragon`s answer to this question, where he points out attempts made by the Authorities to "re-route, downgrade, change use, place TROs on BOATS," etc., in order to remove traffic in the WHS once the tunnel is complete, thereby attempting to remove our most important amenity in practising our faith, i.e. the right to park in the vicinity of Stonehenge at the time of the four solstice and equinox seasonal observances, and, consequently, be able to observe them. Since the above document was written, there have been further unsuccessful attempts made by both Wiltshire Council and English Heritage to limit access/parking still further, which, given the extremely limited extent of pay parking facilities at the Visitors` Centre, show disproportionate discrimination towards those of our faith and all faiths who seek to come to Stonehenge quarterly for but a few hours, in order to honour the ancient and sacred seasonal tradition. In particular, Byway 12 in its unbroken form is essential to us and our congregation.	See response to item 3.2.4 in the Oral Submission Report [REP3-012] and the responses to Written Questions HW.1.16 and HW.1.17 [REP2-032] submitted at Deadline 2.
16.1.2	In addition, whilst walking to the sacred mounds and barrows on the north side of the WHS from Stonehenge is encouraged by the National Trust, and much facilitated by the removal of the old A344, were the	A key objective of the Scheme is to enhance public access and connectivity to and through the WHS. To achieve this, the Scheme is creating a number of new restricted byways, including along the route of the old A303 and alongside the

	short tunnel to be implemented, all direct routes to the sacred mounds and barrows to the South West from Stonehenge, would still be "cut off" by the western approach to the western portal.	A360, and links with the existing public right of way and public access network. The western approach to the western portal is crossed by Green Bridge No. 4 to maintain access across the A303.
16.1.3	A World Heritage site with one section of it "out of bounds" due to an extremely busy and impassable major main road, with all the light and noise pollution that I have highlighted elsewhere, does not allow us to practice our faith freely, in the environment which we believe was created not just for us, but for the public as well, to be one of peace and tranquillity and outstanding universal value, sanctified, since the earliest times in these islands, by generations of prayer and contemplation. Once again, all these problems are resolved by the determination to do the job properly, and build a long tunnel beneath the entire World Heritage Site, thereby restoring the essential tranquillity to the Stonehenge environment.	See response to item 3.3.2 in the Oral Submission Report [REP3-012].
16.2	**Oral Submission**	
16.2.1	Highways England have reviewed Rollo Maughfling's oral submission [REP3-080] and consider all points raised were covered within the Written Summaries of Oral submission put at Open Floor Hearings held on 22 and 23 May 2019 in section 3.3 [REP3-012].	

17 Jon Morris (REP3-082)

17.1	Comments on Written Representations	
	Matter Raised	**Highways England's Response**
17.1.1	Highways England appear to be indicating that the Contingent Valuation Study is not a planning consideration (response to Question SE.1.25) found at: https://infrastructure.planninginspectorate.gov.uk/ wp-content/ip c/uploads/ projects/TR010025/TR010025-000796-8.10.15%20Socio- economic%20effects%20(Se.1).pdf "It follows that the valuation of heritage benefits in monetary units is not primarily relevant to the decision on whether to grant development consent of the Scheme, because those cultural heritage benefits do not need to be monetised in order to be taken into account in the planning balance. The valuation in the CVR was relevant only to DfT's investment decision, which is not a planning consideration." However, as mentioned in my Written Submission, in order to show compliance with National Policy Statement for National Networks, the NPSNN refers (and defers) to the Treasury Green Book for specific guidance on preparing a the business case and methods of valuation needed for the business case. If the business case is not made available for inspection, it will be rather difficult for the Inquiry to review whether or not it complies with the NPSNN (assuming that a review of compliance is within your remit).	See response to item 50.1.1-50.1.3 in the Comments on Written Representations [REP3-013] and the Applicant's response to Written Question Se.1.25 [REP2-035]. 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. 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. 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. 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.

18 GLEAM (REP3-053)

18.1	Comments on Written Representations	
	Matter Raised	**Highways England's Response**
18.1.1	**The TRF proposals (document TR010025-000840)** In paragraphs 5.25 to 5.29 of its written representation the TRF proposes that a link for the public with motor vehicles between AMES 11 and AMES 12 is retained along the old A303 by amending the draft Development Control Order (DCO), and that concerns about vehicles using these byways and the link are addressed by "certain controls". In paragraphs 5.30 to 5.33 the TRF proposes, as an alternative, that the link between AMES 11 and AMES 12 south of the A303 which was included in the first public consultation by Highways England be reinstated. In section 6 the TRF proposes that the whole of the old A303 be available to motorcycles under 50cc.	See response to item 9.1.33 in the Comments on Written Representations [REP3-013].
18.1.2	**Lack of justification for the TRF proposals** The TRF justifies its first two proposals, i.e. for a link for motorcycles between AMES 11 and AMES 12, by reference to section 136(1) of the Planning Act 2008. The TRF says that this legislation means that a new public right of way for motor vehicles is required to replace the A303 as a link between AMES 11 and 12. But this statement is not correct. Section 136 is about public rights of way, i.e. footpaths, bridleways, restricted byways and byways open to all traffic; it is not about all-purpose highways such as the A303. We think that there is therefore no requirement for Highways England to re-provide a public right of way for motor vehicles over the line of the old A303. The TRF proposal that Highways England reinstate the plan for a link between AMES 11 and AMES 12 south of the A303, which was rejected following public consultation, is also unjustified. One of the points we	See response to item 9.1.27 in the Comments on Written Representations [REP3-013].

	made in our response in the public consultation (and in paragraph 8 of our written representation dated 3 May 2019) was that such a byway open to all traffic link would require express dedication of public motor vehicular rights by the landowners. If the landowners refused to dedicate such a link, Highways England cannot provide it.	
18.1.3	**Infeasibility of the TRF proposals** The only way of controlling motor vehicle use of the old A303, if public motor vehicle rights were retained by amending the draft DCO as the TRF proposes, would be a traffic regulation order (TRO) made under the Road Traffic Regulation Act 1984. There is no guarantee that a TRO could be made, whether by the Secretary of State or by Wiltshire Council (depending on who was the traffic authority at the time), in the way proposed by the TRF i.e. prohibiting certain classes of motor vehicles. This is because a TRO proposal must not be pre-determined by the traffic authority but must be subject to consultation with the public and with interested parties and potentially to a public inquiry. If a TRO is pre-determined or not made in accordance with the consultation and other legal requirements, it may be quashed by the High Court. (The experimental TRO made recently by Wiltshire Council on AMES 11 and AMES 12 was quashed by the High Court, in part because certain interested parties had not been consulted). We think that the TRF's proposal is therefore not feasible, because it is dependent on the traffic authority making a TRO, a process whose outcome cannot be guaranteed in advance.	See response to item 9.1.33 in the Comments on Written Representations [REP3-013].
18.1.4	**Incompatibility of the TRF proposals** The TRF proposal is not compatible with National Planning Guidance nor with the World Heritage Site (WHS) Management Plan. As we pointed out in paragraphs 11 and 12 of our written representation, the National Policy Statement for National Networks does not require Highways England to provide new public rights of way for motorised users. Allowing motorised users on the old A303 between AMES 11 and	See response to item 9.1.27 in the Comments on Written Representations [REP3-013].

	AMES 12 (or on the whole of the old A303 between Amesbury and Berwick Down) would mean that non-motorised users would find the old A303 less attractive and convenient than if it became a restricted byway, as intended by the scheme and the draft DCO. The National Policy Statement for National Networks also requires the Secretary of State to avoid or minimise the impacts of the proposal on the WHS. Allowing motorcycles or other motor vehicles to use any part of the old A303 is not compatible with the WHS Management Plan (and the scheme) objective "of fully removing the sight and sound of traffic from the vicinity of Stonehenge" (page 40 of the consultation booklet). The TRF's proposals to allow motorcycles to use the old A303 would mean that motor vehicles would continue to have an impact by being visible and audible in the vicinity of Stonehenge.	

19 C A Shell (REP3-091)

19.1	Comments on Written Representations	
	Matter Raised	**Highways England's Response**
19.1.1	As described in my Written Submission the importance of this WHS Long Barrow cluster is not solely due to its high spatial density, which in itself is merely an interesting statistic, the cluster is spatially concentrated by its disposition around the western dry valley system in the WHS, and occupies a small fraction of the currently designated area of the Stonehenge WHS. Also, as I indicated in my Written Representation, they are the focus for later Neolithic and Early Bronze Age activity, not least of which are the associated Barrow cemeteries.	See response to item 47.1,1, 47.1.6, 47.1.19 and 47.3.1 in the Comments on Written Representations [REP3-013].

20 Friends of the Earth (REP3-052)

20.1	Oral Submission	
	Matter Raised	**Highways England's Response**
20.1.1	It seems that little evidence has been submitted on the scheme's impact on carbon emissions. This is probably because its significance is downplayed by the way this examination is framed by the NNNPS. The applicant is able to conclude that because this one scheme will contribute no more than .03% of any carbon budget its climate impact is therefore of no significance. But of course any element in a programme can be said to be of no significance if that programme is broken down into small enough pieces. It is the cumulative impact of many individual decisions that counts. When we look at the cumulative impacts of transport investment decisions and transport policy as a whole then the significance becomes very much larger.	See responses to items 2.4.1, 2.4.2 and 2.4.3 in Written Summaries of Oral Submissions [REP3-012].
20.1.2	The Committee on Climate Change (CCC) reported to Parliament in 2018 that: "*In our fifth carbon budget assessment, the cost-effective path to 2050 required a 2.3% decrease in road transport emissions in 2016; instead they increased by this amount... The continued rise in road transport emissions highlights the urgent need for stronger policies to reduce emissions and moderate growth in demand for travel.*" It's important to note from the above quote that it's not just cleaner vehicles or electric vehicles that are needed – this alone will not bring about the necessary reductions in greenhouse gas emissions, and overall road traffic will need to be reduced too.	The preparation of the Scheme has been carried out fully in accordance with the relevant legislation and applicable policy in place at the time of the assessment. Please also see our response to relating to the parliamentary declaration of a climate emergency, below.

	Even if all the current and proposed carbon reduction policies were implemented, including those in the Clean Growth Strategy and policies 'at high risk of delivery', the CCC estimate that transport emissions will still exceed carbon budgets by a significant amount over the next 12 years. Added to this, the current carbon budgets will need to be revised downwards, since they pre-date the Paris Climate Agreement and were based on 80% carbon reduction. The CCC has called this month for net-zero GHG emissions by 2050 (i.e. a 100% reduction from 1990).	
20.1.3	Turning to the specifics of the A303 Amesbury – Berwick Down, carbon emissions from this scheme are large and amount to a significant cost. According to Highways England's assessment they have a negative value of £86 million – a substantial amount given that the total calculated benefit of the scheme amounts only to £102 million. Highways England do not quote a range for this figure but examination of the source tables from BEIS shows that it could be 50% higher or lower – up to £129 million. Of course a range can be assigned to any of the figures in the top line analysis but in light of our climate emergency and the very rapidly changing scientific and policy context, it is far more likely that we are at present underpricing carbon emissions than that we are overpricing them. The climate emergency context suggests that the already high negative value attached to this scheme's carbon emissions are far from secure, and could be substantially higher.	The Scheme assessment has been carried out fully in accordance with national policy requirements. The Applicant does not accept that their assessment under-reports predicted carbon emissions. Specifically, with regards to the pricing of carbon, the assessment for the scheme has been undertaken based on the Transport Assessment Guidance (TAG) Unit A3 and using the figures provided in the associated TAG Data Book Table. The central estimate of greenhouse gas emissions costs is accompanied within the WebTAG greenhouse gases worksheet with upper and lower monetary estimates. The NPSNN recommends the use of DfT guidance and WebTAG, and the calculation methodology used for the Scheme complies with this. See response to item 4.5 in the Case for the Scheme Report [APP-294].
20.1.4	Also in the context of the climate emergency, I'd like to draw attention to the positions taken by local authorities. From my experience in SWARMMS I know of the long-standing love affair between major SW authorities and the A303 – 358 corridor. Looking at the representations you have received, support for this scheme and for the corridor dualling as a whole has been expressed individually by Wiltshire, Somerset County and Devon County Councils,	Highways England notes that a climate emergency was declared by the UK Parliament in the House of Commons on 01 May 2019, and that the UK Government has this month committed to introducing legislation that would require the UK to achieve net zero carbon emissions by 2050. A similar declaration was also made by Wiltshire Council in February 2019. As these specific statements followed the preparation and submission of the Scheme

	and support has also been expressed by a partnership which embraces Dorset County Council too. It is however to be noted that Wiltshire, Devon and Somerset councils all passed motions declaring a climate emergency in February this year and Dorset have done the same within the last week. So we call on this examination and on those individual authorities to reconsider whether their positions on this scheme are consistent with the wider, and far more demanding, context of the Climate Emergency.	proposal in October 2018, Highways England welcomes the opportunity to comment on these specific climate change statements now. Whilst "climate emergency" is not itself defined in the declarations, a common theme of the declarations is to seek to reduce UK carbon emissions. Whilst the declarations do not of themselves create binding obligations, the UK is committed to achieving existing national and international commitments to reducing carbon emissions. In order to ensure compliance with these targets, Highways England has thoroughly and robustly assessed the Scheme's effect on climate change. For instance, this assessment established that even during the period when carbon emissions from the project will be at their highest level, the project will only contribute to 0.023% of the UK's carbon budget for the relevant carbon budget period (the 4th carbon budget period). During Scheme operation, the Scheme's carbon emissions will equate to an extremely marginal 0.008% of the UK's carbon budget for the 5th carbon budget period (please see response to item CC.1.6 in the Examining Authority's Written Questions [REP2-028]. Highways England 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. Highways England considers climate change to be a very important issue, and as such has conducted a thorough assessment of the impact of the Scheme on climate change. The recent declarations made by the UK Parliament and Wiltshire Council do not give cause to alter the conclusions of the ES assessment and the Scheme will make an extremely limited contribution to the UK's carbon targets.
20.1.5	So this is the background then: failing transport policy and a growing climate emergency that is recognised by the public and at all political levels. The A303 dualling, and the Stonehenge Tunnel especially, is a high profile, high cost, high carbon project. The decisions that need to be taken on them are among the most significant transport investment	Please see our response above relating to the parliamentary declaration of a climate emergency, and our response to items 2.4.1, 2.4.2 and 2.4.3 in Written Summaries of Oral Submissions [REP3-012].

	decisions over the next few years. I would urge you to consider in your deliberations that the implications for climate policy are of far greater significance than just .03 % of a carbon budget.	

21 Dr Andrew Shuttleworth (REP3-092 to 093)

21.1 Overview

21.1.1 Highways England have responded to Dr Andrew Shuttleworth's oral submission in REP3-012, section 2.3.

In addition, the following points have been made below:

21.2	Oral Submission	
	Matter Raised	**Highways England's Response**
21.2.1	Whilst we have entered into discussions to prepare a Statement of Common Ground, it is a very one-sided affair. When we have challenged Highways Englands proposals using facts and hard evidence, they do seem rather prone to change the ground rules rather than their plans.	The Statement of Common Ground between Highways England and Winterbourne Stoke Parish Council can be found at [REP2-019]. This document has been produced collaboratively between the two parties for the purpose of confirming to the Examining Authority where agreement has been reached, and where agreement has not (yet) been reached, between the two parties. Highways England consider that sufficient detail and justification has been provided at this stage in response to matters raised by Winterbourne Stoke Parish Council within the Statement of Common Ground.
21.2.2	Highways England have failed to listen to those with local knowledge or experience. All levity aside, we feel that we, the locals, those who live, own businesses and work in the area of the World Heritage Site, are being treated very much as second rate citizens in this process, by Highways England, by the Stonehenge Alliance and even by Wiltshire Council.	See responses on pages 4-2 to 4-12 and 5-17 of the Relevant Representations Report [AS-026] and also the response to Written Question CA.1.13 in the Response to the Examining Authority's Written Questions – Compulsory Acquisition [REP2-029]. The Statement of Common Ground [REP2-019] also records the extensive and specific engagement undertaken by Highways England with Winterbourne Stoke Parish Council.

21.2.3	Bypass winterbourne stoke: So, HMG are now looking to private finance to design, build fund and maintain this section of road. Given the record of PFI's in the past, this prospect fills us with a rising sense of dread. Worse still, the projected timescales will certainly be missed - leading to many more years of rat- running and congestion. The alternative, of course, is to go for a lower cost above ground route...	Section 3 of the funding statement [APP-024] explains that private and public funding has been considered. As explained in paragraph 13 of National Audit Office report *'In October 2018, the Chancellor of the Exchequer cancelled future PF2 deals, including for the Amesbury to Berwick Down project*.' The public sector funding for the Scheme is therefore described as 'option 2' in section 3.3 of the funding statement. The Options identification and selection process did consider a number of above ground routes, but all were discounted in favour of the proposed Scheme. Please see Highways England's response to Written Question AI.1.4 [REP2-024] which sets out the options appraisal in more detail.

22 Cycling Opportunities Group for Salisbury (COGS) (REP3-066)

22.1	Oral Submission	
	Matter Raised	**Highways England's Response**
22.1.1	The road presents a considerable barrier and deterrent to most cyclists, walkers and horse riders, collectively known as NMUs, suppressing demand to such an extent that usage is very low unless there are safe crossings. We emphasised this when we responded to the first consultation. After this, in March 2017, I and a number of others responded to a series of questions about NMU use of minor roads and PRoW. We were encouraged by this because the Study Area included all the roads between the A36 and A303, as far east as Cholderton and westwards towards Codford, extending to just north of Salisbury and encompassing some of Salisbury Plain as far north as Fittleton. We provided detailed replies and asked for a copy of any report that was prepared. We have heard nothing since. In July 2018, following the second formal consultation, there was an NMU workshop in Salisbury attended by 2 cyclists' representatives where PRoW and routes for NMUs were discussed and notes of the meeting promised but never supplied. We were still hopeful that a wider view was being taken. However, our responses to Scheme consultations were often met by HE with responses such as "this is not part of the Scheme" or "this is a matter for the local highway authority to deal with". Both these seem slightly disingenuous as HE are well aware that the local highway authority has no money and the Scheme has effects well beyond its narrow borders. Another common response during consultations is that "you don't need to have everything all at once, what you want can be implemented gradually".	See response to item 2.12.1 in Written Summaries of Oral Submissions [REP3-012] and section 7 in the Comments on Written Representations [REP3-013].

22.1.2	Forgive us for being a little cynical and sceptical, but in dealing with large organisations such as HE, our experience is that they are keen to talk to local representatives during the consultation phase of a project, but as soon as consent for the project is granted, it is difficult to get anything implemented that was not enshrined within the formal planning process. For example, we are still waiting for the reconvening of the World Heritage Site Sustainable Access Group since the Visitors Centre was granted permission in 2010.	The Outline Environmental Management Plan submitted at Deadline 3 [REP3-006] states at para 4.4.2 "*The Authority will establish a Stakeholder Consultation Group (SCG) that it will consult on in relation to the specific areas of the detailed design as it is being developed. The SCG will be chaired and administered by The Authority and membership would include representatives of the following stakeholders:* *a) English Heritage Trust;* *b) Historic England;* *c) The National Trust; and* *d) Wiltshire Council."* Wiltshire Council's Rights of Way and Countryside and Highways departments will be consulted on public rights of way proposals and facilities for non-motorised users within the highway. Therefore, through this OEMP measure, it is demonstrated that Highways England is committed to engagement with local representatives beyond the consultation phase.
22.1.3	The formal rejection of anything outside a narrow view of the Scheme is very disappointing, but we don't know how to take forward our ideas as possible Legacy projects or who will decide which projects are funded. We know that there is a possibility of funding for Legacy projects but the selection process remains somewhat mysterious. In October 2018, a Legacy Workshop in Salisbury was attended by about 60 people and outlined how projects identified might be taken forward and funded, but the decision making process is far from clear. The role of the Local Community Forum that meets regularly may be pivotal in this process, but I am not convinced it is reaching a wide enough range of viewpoints. How can we be assured that HE really mean to provide a Legacy and that it is not just a box-ticking exercise. How can a lasting legacy be obtained that betters the lives of those of us who have to live here long after the developer has departed?	Highways England has obtained Designated Fund money to support the WHS in delivering three of the 2015 Management Plan objectives, including their Land Access Strategy, Sustainable Tourism Strategy and Sustainable Transport Strategy. Through its Benefits Steering Group, Highways England is also looking to support partners to plan for the post-scheme future and implement proposals for legacy project improvements to realise the full benefits of the Scheme for local communities and visitors. For example, we might look to support partners' proposals for public rights of way to provide new sustainable ways of accessing the wider area. These initiatives are independent of the DCO application for the Scheme and the necessary mitigation of its effects. These strategies include looking at cycling, Public Rights of Way, and provision for other Non-Motorised Users, and will be looking more broadly than the elements already included in the DCO. Due to the complexities of the WHS, we are starting with these pieces of strategic work to inform the prioritisation and selection of any potential new cycling and other routes, but it is important that we have a strategy first as this will be an exercise in collaboration between multiple

		parties, who need a consensus position to move forwards, and also must represent a careful balance of different interests, including desire lines for NMUs, land owner interests, and also constraints such as heritage and ecology requirements. However, we are anticipating that this strategy, which is being led by the WHS Partnership Panel with support from the A303 Benefits Steering Group, will be completed in roughly the next calendar year, and that this could lead to the identification of, for example, opportunities for new and enhanced cycling routes. This would include a wider geographical reach than the Scheme limits; for example, it might consider how people might want to use sustainable modes of transport to visit the area from abroad. The Community Forum will continue to run throughout the life of the Scheme. There are frequent legacy sessions at the Community Forum, and the invitation is very broad. The Community Forum invites membership from a representative of a community, or a community group, within the vicinity of the Scheme. The Applicant has committed to these legacy initiatives publicly and has every intention of delivering them, using the established mechanisms set out above and in the context of the Government's Cycling and Walking Investment Strategy, which identifies Highways England as one of DfT's partners in releasing its ambition that cycling and walking become natural choices for shorter journeys; and Highways England's Cycling Strategy which supports creating a better environment for cycling through identifying, prioritising and investing in improving cycling conditions. Also see response to item 2.12.1 in Written Summaries of Oral Submissions [REP3-012].

23 Paul Gossage (REP3-076)

23.1	Oral Submission	
	Matter Raised	**Highways England's Response**
23.1.1	National Audit Office say "Using the standard approach for appraising transport projects, Highways England calculated that the Amesbury to Berwick Down project would deliver only 31p for every £1 invested." This is obviously very poor value for money.	See response to item 27.1.5 in the Comments on Written Representations [REP3-013].
23.1.2	Using these survey results Highways England then re-calculated their first figure, and are now saying their project would deliver £1.15 of quantified benefit for every £1 spent. This obviously sounds a lot better. However, I would like to point out that this survey is fundamentally flawed for a lot of reasons (as detailed in a Written Representation to you by a leading expert).	See responses to items in sections 13 and 50 in the Comments on Written Representations [REP3-013] for Highways England's response to the issues raised regarding the Contingent Valuation study.
23.1.3	One of the strongest reasons for me though, is that the people being surveyed were not told that the tunnel project would damage other parts of the WHS such as Blick Mead to the east of the tunnel, and the "densest concentration of Neolithic burial mounds in Britain" (according to Mike Parker Pearson) to the west. I feel that if people had been told these two things then they would have given completely different answers. In summary, Highways England's Simetrica survey is fundamentally flawed and so it is completely invalid.	Contingent Valuation is an acceptable approach to valuing Cultural Heritage. It is a stated preference survey-based methodology that seeks to elicit monetary values for non-market goods by directly asking individuals about their willingness to pay or willingness to accept compensation for a particular change – it is an established economic tool. . The key thrust of the survey was the removal of the road from the WHS and therefore the precise method and alignment was not a key factor. While the survey provided best available evidence about the likely impact of the tunnelling on the landscape and archaeology: "Tunnel entrances would be constructed within the Stonehenge World Heritage site. These would not be visible from the stones but would be new visible features in the archaeological landscape, although the road would be carefully designed to reduce its impact as far as possible", it is important to note that the results of the CVS are not dependent on a specific tunnel alignment and will be valid for a number of alignments. The images of the proposed tunnel route and portal entrances gave a wide shaded area where

		the portals could be located. This means that the precise alignment and location of portals could be decided at a later date to allow for consultation and proper investigation. The archaeological implications of the alignment and portal locations are not monetised through the CVS but are assessed and taken into account elsewhere. This approach is far more appropriate as the archaeological impacts are more specific to alignment options and portal locations. This means any impact does not affect the results of the CVS. The appraisal process therefore aimed to capture only the change in values as a result of the intervention and not the overall values - eliciting responses that were focussed on the impact of removing the road from the landscape leading to visual and amenity improvements. Other, important, heritage impacts have not been monetised but have been qualitatively assessed in ES Chapter 6 [APP-044] and the HIA [APP-195] including the impact on Blick Mead and on the group of long barrows.

24 Simon Banton (REP3-067)

24.1 Overview

24.1.1 Highways England have responded to Simon Banton's oral submission in REP3-012, section 4.3.

In addition to the oral submission, a further point was raised, as detailed below:

24.2	Oral Submission	
	Matter Raised	**Highways England's Response**
24.2.1	There will be an attempt by people to gain a free sight of the monument through use of the Public Right of Way network. This will result in attempts to close the PROW to vehicles. The loss of the casual encounter with this icon of prehistory through the removal of the view of Stonehenge from the road will deny to future generations the inspiration that has existed for over 4,500 years.	The DCO does not propose the closure or a change in status of Byway 12 which is currently open to all vehicles. Changing the status of the existing BOATs is beyond the scope of the Scheme and is a matter that Wiltshire Council would need to consider as the local highway authority through the Traffic Regulation Order (and its associated consultation requirements) process.

25 Suzanne Keene (REP3-078)

25.1 Overview

25.1.1 Highways England have responded to Suzanne Keene's oral submission in REP3-012, section 4.2.

In addition to the oral submission, a further point was raised as shown below:

25.2	Oral Submission	
	Matter Raised	**Highways England's Response**
25.2.1	In HE's verbal response to my presentation they claim that it is effects on the whole WHS that have fed into the cultural value. Not so. • The Case for the Scheme, pp. 8-47[14] • The contingent valuation survey: only visuals of the Stones were shown. • Public Consultation Booklet – January 2017, p.4: Foreward by Chris Taylor – *The other big benefit … is what can be done for Stonehenge, one of our most ancient and historic landmarks … The A303 passes close by and is fully visible from Stonehenge, degrading its setting. …* Also p. 12, • Public Consultation Booklet – February 2018, p. 36: *Both the road and the tunnel have been carefully positioned to take the road and its traffic out of sight from Stonehenge.* That is clearly the primary aim. Other booklets similarly give removing the A303 from sight from Stonehenge as the primary aim, with only passing reference to the whole landscape and other monuments.	See response to item 3.2.23 and 21.2.38 in the Comments on Written Representations [REP3-013].

26 Kate Freeman (REP3-069)

26.1 Overview

26.1.1 Highways England have responded to Kate Freeman's oral submission in REP3-012, section 2.7.

In addition to the oral submission, a further point was raised, as detailed below:

26.2	Oral Submission	
	Matter Raised	**Highways England's Response**
26.2.1	On this record, I have every reason to believe that new technological fixes to removing street lighting from the roundabouts and slip roads will fail over time. Perhaps some tragic event might lead to high fences around green bridges and along the new byway after planning permission has been granted. Or due to an unforeseen increase in visitors there will be further intrusive infrastructure that might be necessary for operational reasons.	A key objective of the Scheme is to 'help conserve and enhance the WHS'. Therefore, to protect the visual impact on the WHS, and ensure no obtrusive lighting within the surrounding rural environment there will not be any lighting along the open road inside or outside the WHS. No standard road lighting is proposed on the A303 or at the roundabout at Longbarrow junction. The existing lighting at Countess roundabout will be replaced with a modern lighting system, as outlined in Environmental Statement Chapter 2 [APP-040]. The roundabouts at Longbarrow junction will be signal-controlled to ensure safe use of the junction providing safe crossing of the A360 (south) for non-motorised users. The proposal to include traffic lights will make the stop lines more prominent for road users and will combat the potential conflict with Walkers, Cyclists, Horse Riders (WCHs) and slow-moving vehicles. The various design commitments to lighting, bunding and fencing are set out in the OEMP, which is secured by the draft development consent order. To reduce the risk of a tragic event occurring at green bridges accessible to non-motorised users, the Scheme proposes several levels of prevention. For example, on restricted byway routes along green bridges, it is envisaged that fencing and earth bunds will be provided on both sides. The proposals aim to ensure that non-motorised users are kept away from the edge.

27 Paul Garwood (AS-042)

27.1	Oral Presentation for Issue Specific Hearing 6	
	Matter Raised	**Highways England's Response**
27.1.1	Claims that the scheme 'protects' the WHS OUVs are unconvincing and unsupported: the scale of destruction is very great (c. 10 ha. inside the WHS and c.20 ha. in the Junction area)'; it involves permanent alteration of terrain; and highly significant spatial and visual relationships are interrupted and their qualities altered detrimentally.	See responses to items 56.1.1 and 56.1.14 in the Comments on Written Representations [REP3-013].
27.1.2	These permanent alterations to the landscape fundamentally compromise the OUV attributes with respect not only to the setting of an internationally significant monument group (in its own right), but also the relationships with other monuments that together form a coherent, uniquely-well-preserved Early Bronze Age sacred landscape.	See responses to items 56.1.2, 56.1.6 and 56.1.28 in the Comments on Written Representations [REP3-013].
27.1.3	If the road scheme is approved at all, it is recommended that the western tunnel is moved at least 1.5 kms to the west, to a point well outside the current WHS boundary.	See response to 56.1.10, 56.1.46, 56.1.57 and 56.1.58 in the Comments on Written Representations [REP3-013].
27.1.4	Integration of multiple survey methods, which recover entirely different kinds of data (what is 'visible' in one is often not in another), should be a condition of geophysical surveys.	See response to 56.1.37 in the Comments on Written Representations [REP3-013] and the Applicant's written summary of oral submissions made at ISH2 in relation to cultural heritage on 5 June 2019 (submitted at Deadline 4).
27.1.5	Demagnetization can render even large features invisible magnetically: this has major implications for the use of magnetometry, which most UK geophysical surveys rely on.	See response to item 56.1.41 in the Comments on Written Representations [REP3-013] and the Applicant's written summary of oral submissions made at ISH4 in relation to cultural heritage, submitted at Deadline 4. The phenomenon of demagnetisation described by Dr Garwood is not widely documented. Dr Garwood's Stonehenge Landscape Electromagnetic Induction

		(SLE) project, from which, the Applicant understands, his proposition arises, is, as yet, unpublished. The scope of the geophysical surveys undertaken for the Scheme was set out in the Archaeological Evaluation Strategy developed in consultation with HMAG and with input from the Scientific Committee. Detailed magnetometry in all areas of the Scheme has been undertaken in accordance with current Historic England guidance and has been supported by targeted ground penetrating radar (GPR) and electrical resistivity surveys. The results of the geophysical surveys have been tested by trial trenching to a sample size and trench array set out in SSWSIs approved by HMAG and/or WCAS, taking into account apparently 'blank' areas in the geophysical survey results as well as testing a range of geophysical anomalies interpreted both as possible archaeological and/or natural features. This approach (detailed magnetometer survey following minimum data collection standards, supported by other geophysical survey techniques where relevant) is considered proportionate and reasonable, and is widely accepted across UK development sectors and curatorial authorities.
27.1.6	Development of geophysical techniques is a continuous process with unknown potential. Destruction of parts of the WHS will deny researchers access to potentially significant data.	See responses to items 56.1.36, 56.1.51 and 56.1.38 in the Comments on Written Representations [REP3-013] and the Applicant's written summary of oral submissions made at ISH2 in relation to cultural heritage, submitted at Deadline 4.
27.1.7	Understanding the geophysical 'signatures' of features requires comparative excavation datasets from both anthropogenic *and* natural features.	See response to 56.1.32 and 56.1.33 in the Comments on Written Representations [REP3-013].
27.1.8	Even small-scale *intensive* excavation of certain feature types, or in areas that have been neglected, are providing major new insights into prehistoric activity within the WHS.	See response to 56.1.32 and 56.1.33 in the Comments on Written Representations [REP3-013].
27.1.9	The finite character of the heritage resource within the WHS, its research and management sensitivity, and the need for sustainability, demand the *highest* possible research-led recovery and recording of all possible data, and not just routine commercial method.	See response to 56.1.60 in the Comments on Written Representations [REP3-013] and the Applicant's written summary of oral submissions made at ISH2 in relation to cultural heritage, submitted at Deadline 4.

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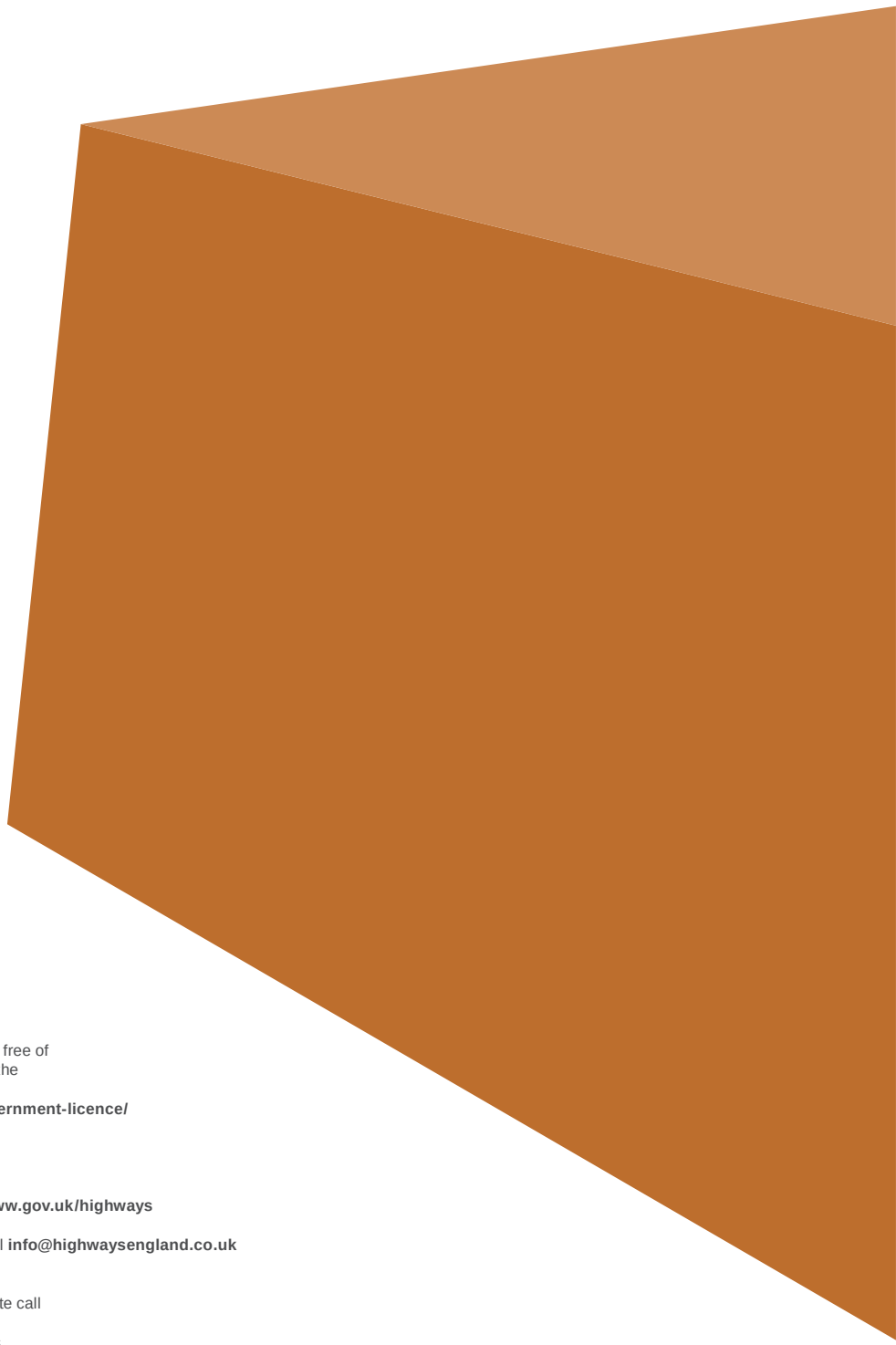

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