

**From:** [David Cox](#)  
**To:** [Rob Pridham](#); [Johansson, KJ](#); [A303 Stonehenge](#)  
**Cc:** [Natasha Kopala](#); [Parody, Derek](#); [David Bullock](#)  
**Subject:** A303 Amesbury to Berwick Down (Stonehenge) - Response to Secretary of State letter dated 20 August 2020  
**Date:** 28 September 2020 23:11:08  
**Attachments:** [20-09-28 SoS Request for Final Comments 20-08-20.pdf](#)  
[Overarching Summary of Responses to Submissions received by the Secretary of State on 13 August 2020 CLEAN.pdf](#)  
[Detailed Response Tables to Submissions received by the Secretary of State on 13 August 2020 CLEAN.pdf](#)

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Dear Mr Pridham & Mr Johansson,

Please find attached a copy of our:

- Covering letter
- Overarching Summary of Responses to Submissions received by the Secretary of State on 13 August 2020
- Detailed Response Tables to Submissions received by the Secretary of State on 13 August 2020

These documents have been produced in response to correspondence received from the Department for Transport on the 20<sup>th</sup> August 2020.

I would be grateful if you would acknowledge receipt of this email and the associated documents.

Best regards

David

**David Cox, Stakeholder & Customer Operational Lead, A303 Amesbury to Berwick Down (Stonehenge)**  
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Classification - Public

Our ref: SoS-04  
Your ref: -

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28 September 2020

Dear Sir/ Madam,

**Planning Act 2008 and The Infrastructure Planning (Examination Procedure) Rules 2010**

**Application by Highways England for an Order granting Development Consent for the construction of a new two-lane dual carriage way for the A303 between Amesbury and Berwick Down in Wiltshire**

**Response to request for final comments on representations received in response to the secretary of state's consultation letter dated 16 July 2020**

Further to your letter dated 20 August 2020 requesting final comments on matters raised in the Hidden Landscapes Project report and comments on representations made on 13 August 2020 relating to the archaeological find at the World Heritage Site, please find below and attached Highways England's ("the Applicant") response. The following documents are enclosed:

- Overarching Summary of Responses to Submissions received by the Secretary of State on 13 August 2020
- Detailed Response Tables to Submissions received by the Secretary of State on 13 August 2020

If you have any queries or require any clarification of our response, please do not hesitate to contact me.

Yours faithfully,



Derek Parody  
A303 Stonehenge Project Director

Encs:



# A303 Amesbury to Berwick Down

TR010025

**Overarching Summary of Responses to Submissions  
received by the Secretary of State on 13 August**

APFP Regulation 5(2)(q)

Planning Act 2008

The Infrastructure Planning (Examination Procedure) Rules 2010

September 2020



Infrastructure Planning

Planning Act 2008

**The Infrastructure Planning (Examination Procedure)**

**Rules 2010**

**A303 Amesbury to Berwick Down**

**Development Consent Order 20<sup>[\*\*]</sup>**

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**Overarching Summary of Responses to Submissions received  
by the Secretary of State on 13 August 2020**

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<b>Regulation Number:</b>	Regulation 5(2)(q)
<b>Planning Inspectorate Scheme Reference</b>	TR010025
<b>Author:</b>	A303 Amesbury to Berwick Down Project Team, Highways England

<b>Version</b>	<b>Date</b>	<b>Status of Version</b>
Rev 0	28 September 2020	Additional Submission

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# 1 Introduction

## 1.1 Secretary of State's request for final comments on representations

- 1.1.1 By a letter dated 20 August 2020, the Secretary of State (SoS) has requested final comments from Highways England, Heritage Bodies and other recipients, on representations made to, and received by, the SoS by the 13 August 2020. This follows a recently published paper reporting an archaeological find within the World Heritage Site and the SoS's consultation on this matter of 16 July 2020.
- 1.1.2 The SoS received representations from Heritage Bodies (Historic England, Wiltshire Council, the National Trust and the English Heritage Trust) as well as responses that were supportive of the Scheme (the Stonehenge and Avebury WHS Coordination Unit, Prof. Timothy Darvill, Mike Pitts, David Dann, Stonehenge Traffic Action Group) and from those opposed to the Scheme (The Consortium of Archaeologists ("the Consortium"), The Stonehenge Alliance, ICOMOS-UK, the Council for British Archaeology ("the CBA"), Amesbury Museum and Heritage Trust, Wiltshire Archaeology & Natural History Society, Suzanne Keene, Simon Banton and Simon Bradley).
- 1.1.3 This document sets out Highways England's ("the Applicant") overarching, summary response to the SoS's request for final comments in relation to the above representations. This document has grouped those representations into "themes" for ease, many of which have been recurrent topics throughout the examination from those opposed to the Scheme.
- 1.1.4 To note, a separate document, that accompanies this Overarching Response, provides the Applicant's detailed responses to each of the representations made by interested parties opposed to the Scheme.

## 2 Representations supportive of the Scheme

- 2.1.1 The Applicant would like to emphasise the strong support for the Scheme from Heritage Bodies. Documented support for the Scheme includes that of Historic England [REP9-038, para. 5.1; AS-111, paras. 1.2–1.11; TR010025-001972], Wiltshire Council [AS-112, paras. 5.1–5.3; TR010025-001968], the English Heritage Trust [REP5-012, para. 2.1; REP2-090, para. 9.1.2; TR010025-001970] and the National Trust [REP2-115; REP9-042; TR010025-001975]. Heritage Bodies have provided responses to the SoS on 13th August that confirm the comprehensiveness and robustness of the documentation provided by the Applicant as part of its application and throughout the examination [TR010025-001972; TR010025-001968; TR010025-001975 and TR010025-001970] and the comprehensiveness of the archaeological evaluations (noting the statements made by the County Archaeologist, Wiltshire Council at the hearings [REP4-030, items 5 (i) and (ii)] and in writing by Historic England in its submission dated 13th August [TR010025-001972]).
- 2.1.2 The Applicant would also draw the attention of the SoS to letters of support for the Scheme from eminent archaeologists on the archaeology of Stonehenge, who are members of the Scientific Committee, including Professor Timothy Darvill [TR010025-001964] and Mike Pitts FSA, prehistorian and author [TR010025-00835; TR010025-001967] and during the examination in support of the detail and comprehensive content of the Detailed Archaeological Mitigation Strategy, Dr Andrew Fitzpatrick [TR010025-001034]. Other support for the Scheme also comes from the recent submission by the Stonehenge and Avebury World Heritage Site Coordination Unit [TR010025-001974], the Stonehenge Traffic Action Group [TR010025-001983] and David Dann [TR010025-001966].
- 2.1.3 With regards to the ‘new discovery’ described in the 2020 Stonehenge Hidden Landscapes Project (SHLP) paper, the Applicant has considered its contribution to the Outstanding Universal Value (OUV) of the WHS and its setting and the impact of the Scheme upon the ‘new discovery’, its interrelationships with other archaeological assets and its contribution to Attributes of OUV. The Applicant prepared Addenda to the cultural heritage chapter of the Environmental Statement (ES) and the Heritage Impact Assessment (HIA), addressing the ‘new discovery’ and submitted these to the Secretary of State on 13 August [TR010025-001979 and TR010025-001980]. The HIA Addendum specifically considers the ‘new discovery’, including the arc of anomalies suggested to form a ‘monumental structure’ surrounding Durrington Walls, and scattered large geophysical anomalies suggested to be ‘pits’ across the landscape and its significance, its contribution to the Attributes, Integrity and Authenticity of the WHS, and the impact of the Scheme on the OUV of the WHS as a whole (taking into account the ‘new discovery’ and anomalies). It is worth noting at the outset that landscape is an integral part of that consideration, given that four of the Attributes of the WHS relate to it. The ES Addendum considers the impacts and Likely Significant Effects of the construction and operation of the Scheme on the ‘new discovery’, heritage assets potentially related to the

‘new discovery’, and pit-like anomalies identified elsewhere in the WHS and within the Development Consent Order (DCO) boundary. It should be noted that in order to ensure that the Secretary of State has the information required for a precautionary, worst case assessment, and despite the comments of other statutory heritage stakeholders and others on the paper, the Addenda take the results of the 2020 Stonehenge Hidden Landscapes paper at face value for assessment purposes and do not attempt to interrogate the evidence base of those results.

- 2.1.4 Importantly, as stated in the ES and HIA Addenda regarding the ‘new discovery’ [TR010025-001979 and TR010025-001980], the Applicant concludes that the Scheme will not adversely affect the physical remains of the suggested monumental structure, or its setting. With regard to the additional suggested discrete large pit-like anomalies across the landscape outside of the Scheme boundary [noted on figure 9 in the SHLP paper], these will similarly be unaffected by the Scheme. Those pit-like anomalies within the Scheme boundary will either be protected and retained in situ or will be archaeologically excavated and recorded.
- 2.1.5 The HIA Addendum concludes that the effects of the Scheme on the WHS as a whole, the Attributes of OUV, its Integrity and Authenticity, as assessed in the Main HIA [APP-195] submitted with the Application, remain unchanged. The ES Addendum has not identified any new likely significant effects beyond those already identified in the Main ES [APP-044] submitted with the Application.
- 2.1.6 The Secretary of State should note that both Wiltshire Council [TR010025-001968] and the National Trust [TR010025-001975] reviewed the ‘new discovery’ in both their submissions in terms of the evidence base and its significance; they both conclude that the evidence for a ‘monumental structure’ is currently lacking. We would point the Secretary of State also to the submissions of eminent archaeologists Prof. Timothy Darvill [TR010025-001964] and prehistorian and author Mike Pitts FSA [TR010025-001967] who disagree with the interpretation of the ‘new discovery’.
- 2.1.7 With regards to the assessments submitted by the Applicant as part of the DCO Application, heritage bodies responded to the Secretary of State by 13 August 2020 as follows:
- 2.1.8 Historic England stated “*We consider that the assessments conducted under the Scheme were sufficiently rigorous to inform determination of the Scheme and development of an appropriate and proportionate archaeological mitigation strategy. The recently published research does not change our view of those assessments*” [TR010025-001972, para. 2.4.10].
- 2.1.9 Wiltshire Council noted that “*In the Council’s view, the findings do not change the assessment of impact of the A303 scheme on the OUV of the WHS contained within the EIA and HIA. Furthermore, the DAMS and forthcoming SSWSIs provide a mechanism for fully assessing any further such features which may be discovered during the mitigation phase on the*

*road line and portals, in the unlikely event that they have not been picked up during the evaluation.” [TR010025-001968, section 4].*

- 2.1.10 The National Trust have stated, *“In response to the Secretary of State’s request we have also considered the implications for the Applicant’s Environmental Statement (ES), including the Heritage Impact Assessment (HIA), and the proposed Detailed Archaeological Mitigation Strategy (DAMS). In our view there are no substantive implications for the Applicant’s ES, the HIA or the DAMS.” [TR010025-001975, para. 7.1.3].*
- 2.1.11 English Heritage Trust stated, *“English Heritage considers that the discovery of the pit circuit does not imply that the heritage assessments by Highways England were not rigorous enough... Furthermore, an iterative and reflexive process of assessment for new discoveries is already built into the DAMS for the Development.” [TR010025-001970, Conclusion 2].*
- 2.1.12 In his submission, David Dann, makes the case for improving safe access to the area to the south-west of Stonehenge, between the Stones and Normanton Gorse, in particular Amesbury G15 (the Sun Barrow) which is cut by the existing A303 surface road. David Dann states that this *“seems to me to be an insult to the monument and its creators”* and *“clearly [...] is an untenable situation which can only be resolved when the [existing] A303 is removed from cutting across this south-west sector”*. The Applicant agrees with David Dann’s submission and notes that the Scheme will do exactly that. The Applicant further states that the benefits from removing the existing A303 surface national trunk road into a tunnel, will improve the setting of the Stones and many groups of barrows in the surrounding landscape, including the Sun Barrow (Amesbury G15) to the southwest of the Stonehenge stones. The Scheme allows for the safe reconnection of the World Heritage Site to the north and south of the existing A303, allowing people to explore the landscape through the use of existing byways and other Public Rights of Way either side of the existing A303.



### 3 Representations from interested parties opposed to the Scheme

- 3.1.1 With regards to submissions by other interested parties, a number of cross-cutting “themes” are apparent in those submitted to the Secretary of State by 13th August from those who are opposed to the Scheme. The Applicant’s responses to these “themes”, many of which have been recurrent topics throughout the examination, are set out below.
- 3.1.2 In general, interested parties opposed to the Scheme have sought to use the ‘new discovery’ as an opportunity to re-raise their previous submissions, despite the fact that they have already been comprehensively dealt with by the Applicant during the course of the examination. While the Applicant has carefully considered those submissions in the context of the ‘new discovery’ and responded in detail to each in the enclosed detailed response tables, the key message remains as articulated in its submission of 13<sup>th</sup> August: even if the proposed ‘new discovery’ is proven to be correct, the evaluation and mitigation strategies for the Scheme remain robust and the conclusions of the ES and HIA on the effects of the Scheme are unaffected.
- 3.1.3 The first of these “themes” is that **‘the ‘new discovery’ highlights how undiscovered and significant the wider prehistoric landscape is’** which is put forward in a range of submissions.
- 3.1.4 The Applicant has recognised the WHS as of the highest significance throughout its assessments [REP4-030, items 3 (ii) and (vi)]. The HIA [APP-195] and the ES [APP-044; APP-218 and related appendices] submitted with the Application (and the ES and HIA Addenda [TR010025-001979 and TR010025-001980]), which include consideration of landscape, assess the impact of the Scheme accordingly and assign the WHS as a whole the highest level of significance (‘Very High’ – applicable to the WHS and to features that convey the Attributes of OUV). The HIA and its Addendum pay particular attention to the prehistoric landscape and the interrelationships of monuments and the landscape as a whole, in the context of Integrity, Authenticity and Attributes of OUV. The Applicant, however, does not agree that the landscape along the route corridor is ‘undiscovered’ and has undertaken extensive archaeological evaluations that support the DCO application [REP1-039 to REP1-056; REP3-023 & REP3-024] (on which, see further below), to add to all of the evaluation already done throughout the WHS over the years.
- 3.1.5 The second “theme” that arises is that **‘advances in technology will enable future research to be undertaken better and with greater understanding of the wider landscape and its archaeological research potential’** which is also put forward in a range of submissions.
- 3.1.6 The Applicant acknowledges that understanding of the uses and meanings of the WHS landscape is the subject of a constantly evolving debate. The speculative argument that future technology may discover more information about the WHS is addressed in the Applicant’s Comments on Written



Representations [REP3-013, para. 21.4.4]. In any event, the comprehensive Detailed Archaeological Mitigation Strategy (DAMS) [TR010025-001951], developed in consultation with members of the Heritage Monitoring and Advisory Group (HMAG), and with input from the Scientific Committee, is designed to capture current research questions and is reflexive and iterative in order to respond to and incorporate new technologies, developing theories and interpretations as the design of the archaeological mitigation works is progressed, and to address new discoveries during the mitigation programme. Heritage consultees have confirmed in their submissions that the DAMS is fit-for-purpose and that the dDCO, Outline Environmental Management Plan (OEMP) and DAMS ensure that heritage advice can play an appropriate and important role in relation to the Scheme detailed design [see Historic England's closing statement to the Examination - TR010025-001736, para. 1.7].

- 3.1.7 Another common submission theme from a number of interested parties has been that **'if the Scheme goes ahead, archaeology will be lost, destroyed or unrecoverable which could allow for future research and understanding of the wider landscape'**.
- 3.1.8 In response to this, first, the Scheme is designed to avoid impact on archaeology as much as possible. Heritage has been a key consideration during route selection, one of the Scheme's objectives being to help conserve and enhance the WHS. The preferred route was carefully chosen to minimise effects on known archaeology and archaeological evaluations have informed the Scheme design. The Scheme therefore has sought to limit physical impacts on archaeological remains, particularly those that contribute to the OUV of the WHS. Second, any impacts of the Scheme that cannot be avoided will be carefully mitigated, so that the archaeology impacted is not lost, destroyed or unrecoverable. Should the Scheme gain consent, those archaeological remains impacted will be carefully excavated and recorded to the highest practicable standards in accordance with the DAMS [TR010025-001951], mitigation being tailored to maximise the significance and research potential of the archaeological remains uncovered. The project has the potential to create a living legacy of archaeological knowledge from the Scheme, as archaeological information, finds and samples arising from the fieldwork will be available for future examination and research. The DAMS also requires the delivery of Public Archaeology and Community Engagement activities [TR010025-001951, Appendix E] and a comprehensive publication and dissemination programme [TR010025-001951, section 9], in order to deliver a lasting legacy.
- 3.1.9 Many interested parties highlight that **'further studies are needed to investigate the 'new discovery' further and see how far it extended'**.
- 3.1.10 As discussed above, the Applicant notes that the 'new discovery', in terms of the suggested 'monumental structure', lies to the north of, and outside, the DCO boundary and it has responded with HIA and ES Addenda [TR010025-001979 and TR010025-001980] that consider how the Scheme might affect the proposed 'new discovery', addressing wider issues of setting and the OUV of the WHS. The Addenda conclude that there were no new Likely

Significant Effects and No Change to the overall conclusion of the HIA and the impact from the Scheme on the OUV of the WHS as a whole, following the publication of the 2020 SHLP Paper. The Applicant concludes that there will be no impact upon the ‘new discovery’, in terms of the suggested ‘monumental structure’, or its interrelationships and therefore no further investigation is warranted prior to any decision being made on the Scheme. The ES [APP-044] and HIA [APP-195] assess impacts on known and likely heritage assets for which there is archaeological evidence based on previous studies, comprehensive field surveys and ground truthing. Should development consent be granted, the reflexive and iterative strategy contained in the DAMS [TR010025-001951] is designed to respond to developing theories and interpretations from further studies and incorporate them in the design of the archaeological mitigation.

- 3.1.11 A number of interested parties suggest that **‘the boundary of the WHS should be reconsidered in light of the ‘new discovery’**”.
- 3.1.12 With regards to this, the Applicant has previously explained that any boundary review would be a long and complex process but that in any event, it has already considered effects of the Scheme on assets outside the boundary of the WHS in the assessments contained in the ES and HIA and their Addenda.
- 3.1.13 The Applicant’s cultural heritage assessments considered the fact that Stonehenge, Avebury and Associated Sites was in the first cohort of UK WHS nominations in 1986, that understanding of the landscape has changed since nomination, and that the WHS does not have a buffer zone. A draft minor boundary review was prepared in 2012. Taking a precautionary approach, the HIA study area considered the findings of the 2012 draft review and encompassed related sites outside the current WHS boundary, as well as the setting of both individual monuments and the overall setting of the WHS [APP-195, 5.3.17; 5.10.2; 5.10.4; APP-218]. The HIA [APP-195] considers impacts of the Scheme on the OUV of the WHS and the WHS as a whole, including assets and asset groups that contribute to the Attributes of OUV of the WHS both inside and outside the WHS boundary, and acknowledges that Scheme effects may extend beyond the boundaries of the Stonehenge part of the WHS. The HIA [APP-195] also considers impacts both on sites located within the current WHS boundary, and related archaeological features that contribute to OUV located outside the current boundary, including Durrington Walls, Woodhenge and Associated Sites; Larkhill Causewayed Enclosure; and Neolithic settlement at Durrington Walls [APP-195, 5.10.2]. The ES Addendum [TR010025-001979] and HIA Addendum [TR010025-001980] conclude that even if the conclusions of the 2020 SHLP Paper regarding the ‘new discovery’ are correct, this makes no change to the assessment of the ES [APP-044] on likely significant effects and the HIA [APP-195] on impacts and effects on the OUV of the WHS and on the WHS as a whole.
- 3.1.14 The Department for Digital, Culture, Media and Sport (DCMS), Wiltshire Council and Historic England addressed the WHS setting study and the boundary review at Issue Specific Hearing 2 [REP4-030]. Wiltshire Council

noted that the boundary review was on hold, pending completion of the setting study. Historic England explained that any modification to the WHS boundary (or provision of a buffer zone) would be a lengthy and complex process; any modification to the boundary proposed would then need approval by DCMS and then the World Heritage Committee [REP4-030, item 3 (v)].

- 3.1.15 A number of submissions suggest that **‘the eastern portal and eastern approach will create a divide between the Avenue and the ‘new discovery’ and will deny the possibility of further research in this area’**, and therefore **‘the eastern portal location should be reconsidered’**.
- 3.1.16 With regard to any division, the HIA Addendum [TR010025-001980] assesses the effect of the Scheme on the ‘new discovery’, suggested to be a ‘monumental structure’ as Neutral. The assessment of the effect of the Scheme on the WHS overall remains unchanged and is assessed as Slight Beneficial. It is also important to note that the Scheme has a Large Beneficial effect on the Avenue because it remedies the current severance caused by the existing A303.
- 3.1.17 The Applicant notes that the existing A303 surface road currently divides the landscape and severs the Avenue scheduled monument. The existing status quo therefore has a Large Adverse effect on the Avenue [see the HIA, APP-195; pages 354–356]. In comparison, the Scheme will result in a Large Beneficial effect through the removal of existing severance, much of the existing aural and visual intrusion of traffic from the surface A303, the restoration of the physical connectivity where the Avenue is currently severed and improvements to the integrity and setting of this monument. The eastern portal will be constructed in the base of a dry valley to the east of the Avenue and the tunnel portal concealed with a grassed canopy. The existing A303 surface dual carriageway will be removed and will be grassed over, allowing safe crossing of the Avenue at this point and its potential future reconnection as a processional route. The impact of the Scheme on the setting and significance of the ‘new discovery’ suggested to be a ‘monumental structure’ and how it conveys Attributes of the OUV of the WHS (which includes consideration of its interrelationship with the Avenue and other assets) is assessed in the HIA Addendum [TR010025-001980, section 6] as Neutral. The overall conclusions and assessment of the impact of the Scheme on the OUV of the WHS as a whole remains unchanged as Slight Beneficial.
- 3.1.18 The removal of the existing A303 surface dual carriageway and its aural, visual and traffic intrusion (including current severance), and hiding the eastern portal in a dry valley under a grassed canopy, will improve the setting of the Avenue and its visual relationships to other monuments and the ‘new discovery’ to the north-east.
- 3.1.19 With regard to future research, rather than hindering future research, the comprehensive DAMS [TR010025-001951] will ensure that the archaeological evidence within the footprint of the Scheme will be carefully archaeologically excavated and recorded and allow opportunity for future re-

analysis and interpretation of the results. Should development consent be granted, the reflexive and iterative strategy in the DAMS [TR010025-001951] is designed to respond to developing theories and interpretations resulting from future research and incorporate them in the design of the archaeological mitigation and will not preclude research from taking place.

- 3.1.20 Specifically, with regard to the position of the eastern portal, in the view of the UNESCO World Heritage Centre/ICOMOS Advisory Mission 2018:

*“The eastern portal has been positioned in the least impactful location available close to the WHS boundary, given the constraints imposed by the attributes of the WHS, other significant sites in the vicinity, and local topographic and environmental conditions. The location of the eastern portal to the east of The Avenue and its siting within a micro valley is an improvement on previous options.”*

- 3.1.21 That statement remains equally valid following the ‘new discovery’, given that the ES and HIA Addenda show that the effects of the Scheme are unchanged.
- 3.1.22 Similarly, respondents suggest that **‘the western portal and associated cutting along the western approach would destroy many burials in this area and the prehistoric landscape which may be linked to the ‘new discovery’**’.
- 3.1.23 The Applicant has designed the approach to the western portal to limit physical impacts on archaeological remains as far as possible, through the use of vertical retained cuttings, and to avoid archaeological remains that are known to contribute to the OUV of the WHS.
- 3.1.24 With regards to burials, only two burials have been recorded in the extensive archaeological evaluations undertaken by the Applicant within the western approaches, and these were located outside the construction footprint for the new road cutting and the portal. The assumption that a large number of burials will be destroyed by the road cutting and portals is therefore unfounded [REP4-030, Agenda Items 5 (i/ii)].
- 3.1.25 In respect of the prehistoric landscape, the Scheme design removes the impacts of the existing surface A303 and the Longbarrow roundabout and associated lighting from immediately adjacent to the Winterbourne Stoke long barrow itself, at the southwest end of the Winterbourne Stoke Crossroads Barrow Group. The surface A303 also creates aural and visual intrusion and severance in the western part of the WHS between the Winterbourne Stoke Crossroads Barrows and other barrow groups including the Diamond Group and the Normanton Down Barrows and isolated and discrete assets (including further barrows and the Wilsford Shaft), to the north and south of the existing road. The new road alignment would be positioned 150m south of the existing A303 and placed in deep cutting to conceal the sight and sound of traffic in views between the barrow groups and isolated and discrete assets in this part of the WHS. The position of Green Bridge 4 would provide physical and visual connection of the

landscape between the Winterbourne Stoke Crossroads Barrows and the Diamond Group as well as the two upstanding long barrows in the western part of the WHS in these barrow groups. This 150m long green bridge, and the western portal's 200m long grassed canopy, would help to mitigate the impact of new severance in the landscape created by the cutting.

- 3.1.26 The improvements to setting, from the removal of the existing road and roundabout from immediately adjacent to the Winterbourne Stoke Crossroads Barrows; the removal of aural and visual intrusion from other barrow groups and isolated and discrete assets in this part of the WHS, and the providing of safe access using improved and enhanced Non-Motorised User (NMU) routes, would deliver substantial benefits to this part of the WHS following Scheme construction. The Applicant therefore strongly disagrees that the Scheme, with its retained cutting and the position of the western portal hidden in the landscape at the head of a dry valley, has only the negative impacts on the prehistoric landscape suggested by those correspondents opposed to the Scheme.
- 3.1.27 With regards to the 'new discovery', that is suggested to form a 'monumental structure' surrounding Durrington Walls, this is c.2.4km from the Normanton Downs Barrows (at its closest point) and c.4km from the Winterbourne Stoke Crossroads Barrows (at its closest point) with King Barrow Ridge restricting inter-visibility between the two areas completely. Given the distance, there are no links or inter-relationships between the 'new discovery' and the parts of the WHS through which the western portal and its approach road passes and so no change in the assessment of effects of the western end of the Scheme as a result of the 'new discovery'.
- 3.1.28 A few respondents suggested that the HIA had been undertaken incorrectly, stating that **'the 'new discovery' reinforces the notion that assets cannot be looked at individually or in groups, they must be looked at in the wider context of the prehistoric landscape'**, that **'the impact of the Scheme should be assessed on the WHS as a single entity'** and that **'the Attributes of the OUV would be compromised if the proposed Scheme goes ahead'**.
- 3.1.29 As was submitted on a number of occasions throughout the examination, the Applicant has undertaken appropriate attribute-based HIA, in accordance with the universally accepted and uniformly followed 2011 [ICOMOS Guidance on Heritage Impact Assessments for Cultural World Heritage Properties](#), and the [HIA Scoping document](#), which set out the methodology of the full HIA, which was endorsed as appropriate by the 2018 UNESCO World Heritage Centre/ICOMOS [Advisory Mission](#) and approved by HMAG (Historic England, Wiltshire Council, the National Trust and English Heritage). Historic England also noted that the HIA was thorough and broadly concurred with the assessment in the HIA in its application of the ICOMOS 2011 guidelines [TR010025-001972], and the overall assessment conclusions. In particular, Historic England stated in that submission (para 2.4.10):



*"We consider that the assessments conducted under the Scheme were sufficiently rigorous to inform determination of the Scheme and development of an appropriate and proportionate archaeological mitigation strategy. The recently published research does not change our view of those assessments."*

- 3.1.30 Regarding the need to consider assets in the context of the wider landscape, the Secretary of State should note that the Applicant has responded to these points throughout the examination regarding its approach to the HIA (see for example the Applicant's response to ICOMOS UK [REP7-021, para 31.1.2]). This argument is unfounded, as the Applicant's HIA deals with the wider context at length, including spatial, topographic and chronological relationships; inter-relationships and contextual associations between individual assets, Asset Groups and areas; and the articulation of the wider prehistoric landscape. The HIA considers the wider impacts of the Scheme upon the Attributes that convey the OUV of the WHS, (four of which incorporate landscape considerations) its Integrity and Authenticity in extensive detail [APP-195, sections 6 & 9–12].
- 3.1.31 With regards to considering the WHS as a single entity, the Applicant's assessments already consider the impacts and effects of the Scheme in relation to the whole WHS. This point has been responded to at length previously during examination, for instance at written question G.1.1 [REP2-021] and CH.1.4 [REP2-025], as well as the response to agenda items 3 (vi), 4 (i), 4 (ii) and 4 (iii) in the oral submission report from ISH2 [REP4-030] and appendix A of that oral submission report. These submissions detail the correct application of the World Heritage Convention as part of the UK's legislative and policy framework, and discuss ICOMOS 2011 HIA guidance, which identifies that the process of assessing the impact of the Scheme on the WHS requires consideration of harm against benefits (ICOMOS 2011, paras. 2-1-5; 6-2). Careful consideration has been given to the effects arising from beneficial and adverse impacts, presented in HIA section 11, Evaluation of overall impact and significance of effect of Scheme on the OUV of the WHS. This considers impacts and effects in relation to Scheme locations, Integrity and Authenticity, Attributes of OUV, and assesses the overall significance of effect of the Scheme. Section 12, Summary and conclusions, considers the Scheme's alignment with WHS Management Plan vision, aims and policies [APP-195, section 12.3] and effects on the OUV of the WHS as a whole [APP-195, section 12.4]. The Applicant also directs the Secretary of State to its detailed response at examination on this matter [see REP7-021, paragraph 31.1.2] which provides a further explanation as to how impacts and effects have been considered in relation to the whole WHS, in support of the Applicant's position that this approach is correct and supported by the relevant guidance.
- 3.1.32 With regards to the submissions that the Attributes would be compromised by the Scheme, these are again mistaken. The Applicant is concerned to protect and conserve the WHS and sustain its OUV. The Scheme has been designed to avoid or minimise impacts on heritage assets and Asset Groups that convey the Attributes of the OUV of the WHS. The Applicant has followed the appropriate guidance (ICOMOS 2011). The HIA assesses

potential positive and negative Scheme impacts on the tangible heritage assets and intangible aspects that convey Attributes of OUV and Integrity and Authenticity: the values that make it a WHS. This then leads to an assessment of impacts on the Attributes which express the OUV and ultimately assesses the overall effect on OUV and therefore on the WHS as a single heritage asset.

- 3.1.33 None of this is affected by the ‘new discovery’. The HIA Addendum [TR010025-001980] focuses on the nature of the ‘new discovery’, its contribution to the Attributes expressing the OUV of the WHS, and to Integrity and Authenticity. The HIA Addendum considers its stated relationships with known heritage assets, Asset Groups and the wider WHS landscape, including developing theories regarding the possible zonation of the landscape. It assesses the impacts and effects of the Scheme on physical and setting aspects of the ‘new discovery’ and on known heritage assets potentially related to it. As with the HIA [APP-195], the Addendum goes on to assess the impacts and effects of the Scheme on Attributes of the OUV of the WHS, its Integrity and Authenticity, ultimately assessing the overall effect on OUV and on the WHS as a whole, and concluding that it is unchanged from that already set out in the main HIA..
- 3.1.34 One interested party submitted that **‘the absence of discovered heritage assets does not mean that nothing of value exists on a landscape scale – empty spaces have value in the context of the WHS’**.
- 3.1.35 There is no connection between this submission and the ‘new discovery’ but the Applicant has nevertheless responded to reiterate its detailed submissions at examination. The ‘spaces in between’ and the impacts of the Scheme on the invisible sites, features and artefact scatters that have the potential to contribute to the OUV of the WHS in those spaces have been an integral part of the assessments within the HIA [APP-195] and the ES [APP-044] and in the final DAMS [TR010025-001951]. The conclusions of those documents and the Addenda therefore already have due regard to the value of those spaces.
- 3.1.36 The Applicant has responded to this point previously at examination [see responses to ICOMOS-UK, REP7-021, paras. 31.1.2 and 31.1.5]. The Applicant agrees that the spaces in between have value in the context of the WHS. The Applicant’s HIA clearly states, *“If, as is widely accepted, the siting of monuments in relation to each other is, or was significant, then it can be extrapolated that meaning may also have been attached to the gaps between them”* [APP-195, 351]. The HIA also cites the 2015 WHS Management Plan, which notes, *“There are [...] areas which appear to have been deliberately left empty of monuments. These are important for our constantly developing understanding of the landscape as a whole”* [Simmonds and Thomas 2015]. This is relevant to conveying the sixth Attribute of OUV, ‘the disposition, physical remains and settings of the key Neolithic and Bronze Age funerary, ceremonial and other monuments and sites of the period, which together form a landscape without parallel’. The HIA [APP-195] and HIA Addendum [TR010025-001980] therefore has

considered impacts of the Scheme on such empty spaces as part of its assessment of impacts on the Attributes of the WHS.

- 3.1.37 The Applicant's assessments have considered aspects ranging in scale from small individual features identified in geophysical and trial trench evaluation, to the landscape-scale articulation of monuments, topography and skylines and complex contextual associations and relationships [APP-195, section 6.8–6.10]. The Applicant's assessment has regard to historic landscape character [APP-044, section 6.9; APP-215; APP-045; APP-195, section 6.4], spatial context, geology and topography [APP-195, section 6.2], and setting [APP-218]. All of this necessarily includes consideration of the empty spaces between monuments.
- 3.1.38 It also considers spaces that may seem empty but are not. The HIA considers non-monumental sites with no surface expression, including ploughed-down earthworks, sub-surface pit clusters and postholes, and ploughzone artefact scatters [APP-195, para. 5.10.18]. Proven Early Neolithic to Early Bronze Age settlement sites, are assessed as being of Very High value [APP-195, para. 9.3.5]. The HIA also considers theories regarding movement between areas, processional routes and possible zonation. These are all thoroughly assessed in the HIA [APP-195] and HIA Addendum [TR010025-001980].
- 3.1.39 The DAMS [TR010025-001951] provides for archaeological mitigation fieldwork within the road construction footprint. This commitment allows for the careful archaeological excavation of areas that are considered to be 'spaces between monuments' allowing for a better understanding and interpretation of their use and meaning. This has previously been addressed in the Applicant's response to Comments on any further information requested by the Examining Authority and received at Deadline 5 and 6 [REP7-021, item 31.1.5].
- 3.1.40 The 'spaces in between' and the impacts of the Scheme on the invisible sites, features and artefact scatters that have the potential to contribute to the OUV of the WHS in those spaces have therefore been an integral part of the assessments within the HIA [APP-195] and the ES [APP-044] and in the final DAMS [TR010025-001951]. The conclusions of those documents and the Addenda therefore already have due regard to the value of those spaces.
- 3.1.41 Some interested parties have suggested that **'the 'new discovery' shows how inadequate and ineffective the previous sampling and investigation was and/or that other features in the landscape may have been missed'**.
- 3.1.42 The Applicant has already shown in multiple submissions to the examination how those criticisms are mistaken. The strength of those submissions is undiminished by the 'new discovery'. The Applicant has responded in detail to this regarding the quality of its archaeological evaluations during examination and also in its Overarching Response to the Secretary of State submitted on 13th August [TR010025-001981, section 2]. 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. The suitability and comprehensiveness of the evaluation programme were confirmed in oral submissions put at Cultural Heritage hearings on 5 and 6 June 2019 by the County Archaeologist, Ms Pomeroy Kellinger on behalf of Wiltshire Council [REP4-030, items 5 (i) and (ii)] and as indicated by Historic England's recent assessment of the Applicant's geophysical surveys in its submission dated 13th August [TR010025-001972]. The results of the evaluation programme reports [REP1-039 to REP1-056; REP3-023 & REP3-024] have been approved by HMAG and have been taken fully into account in developing the Detailed DAMS [TR010025-001951]. The 'new discovery' does not point to any deficiency in the scope or execution of the evaluation strategy. All anomalies cited by interested parties within the DCO boundary as being undetected by the Applicant, have in fact been detected [see ES Addendum, TR010025-001979] and considered in the evaluation reports, the ES, HIA and DAMS and take full account of the potential for such features to contribute to understanding of human activity. As pointed out in the Overarching Response [TR010025-001981, section 2.4], the archaeological evaluation surveys have picked up numerous geophysical anomalies within the DCO boundary and ground truthed them. The 2020 SHLP Paper itself accepts that part of the 'new discovery' is made up of natural features and the Applicant's archaeological evaluation reports contains careful justification of the characterisation of anomalies as natural, which the 'new discovery' does nothing to affect. The Applicant therefore stands by its archaeological evaluation surveys, and the DAMS [TR010025-001951], in any event, already recognises that natural features may contain archaeological assets and indeed provides for 100% excavation of these features should they contain archaeological material.

- 3.1.43 Another third party submits that **'the 'new discovery' supports the notion that sinkholes are present in the WHS and that tunnel boring would cause ground movement and subsequent archaeological damage'**.
- 3.1.44 As set out above, the Applicant has already carried out detailed assessment within the DCO boundary, identifying all of the geophysical anomalies pointed out by the 2020 SHLP Paper, and so the 'new discovery' does not point to any deficiencies in that regard. Moreover, the Applicant has committed to the necessary mitigation to protect archaeological assets from damage as a result of ground movement via the Ground Movement Monitoring Strategy as set out in the OEMP [TR010025-001949 (see below)].
- 3.1.45 The Applicant has previously addressed geological, hydrogeological and geotechnical aspects of the WHS in its response to Written Question Fg.1.5 [REP2-031] and at the issue specific hearings on Cultural Heritage [REP4-030, item 6, page 2-28] and on Noise, Vibration, Health and Wellbeing [REP4-033, item 6 (iii)]. A detailed assessment of ground movement has been undertaken and the results are set out in the Land Instability Risk

Assessment Report [APP-278]. Tunnel movement monitoring stations were discussed in the cultural heritage hearing [REP4-030, item 7 (iii)] and approaches are detailed in the DAMS [TR010025-001951, paras. 5.2.6–5.2.8].

- 3.1.46 The Applicant has previously responded in relation to tunnelling vibration impacts in Comments on any further information requested by the Examining Authority and received at Deadline 4 [REP5-003, para. 11.2.57], setting out further information on the ground movement monitoring and complimentary vibration modelling that would be implemented during works. These will be secured under the DCO through provisions included in the OEMP [TR010025-001949; provisions MW-CH1, MW-CH7, MW-CH8, MW-NO13, MW-NO15 and MW-NO16], with the development of the Heritage Management Plans and monitoring strategy to protect the historic environment, further detailed in the DAMS [TR010025-001951, paras. 5.1.20–24, 6.1.3–10 & 7.3.3 and Appendix C.2].
- 3.1.47 The Ground Movement Monitoring Strategy and Noise and Vibration Management Plan will address the requirement that best practicable means are used to minimise noise and vibration across the Scheme [TR010025-001949; provisions PW-NO11, MW-NO11]. There is no standard threshold for construction vibration levels or tunnelling induced ground movements significantly affecting archaeological earthworks, such as burial mounds, and buried assets, due to the unique and varying sensitivity of such assets. There are good reasons to not establish precise levels of vibration for the Scheme at this stage, not least given the assessment undertaken to date has adopted a conservative approach and is therefore extremely robust, and it has not identified likely significant vibration effects on heritage assets. In the Cultural Heritage, Landscape and Visual Effects and Design hearing [REP8-016, item 4.3 (i)], the Applicant noted that Highways England will continue to discuss with key stakeholders the issue of the methodology for measuring vibration during the detailed design stage. Key stakeholders, including Wiltshire Council, the Environment Agency, Historic England and Natural England, will feed into the process of determining the final vibration monitoring regime, including in relation to archaeology. The Noise and Vibration Management Plan and the Ground Movement Monitoring Strategy would both be approved by the Secretary of State, and the Heritage Management Plan would be approved by Wiltshire Council.
- 3.1.48 Two third parties submit that **‘the Examination should be reopened, otherwise it is procedurally unfair’**.
- 3.1.49 These submissions are clearly misplaced, as set out in the Applicant’s Overarching Response addressing the ‘new discovery’ [TR010025-001981, Appendix A]. The Secretary of State’s letter of 16 July 2020 set out a full process for allowing recipients to respond to the 2020 SHLP Paper and to the submissions of the Blick Mead Project Team and Consortium of Archaeologists or the Stonehenge Alliance on 25 and 26 June 2020.
- 3.1.50 Further, by the Secretary of State’s letter of 20 August, a subsequent process was set out by which interested parties have been given a further

period within which to comment on submissions. In addition, the Applicant has undertaken notification and consultation procedures mirroring Regulation 20 of the 2017 EIA Regulations in respect of its work submitted to the Secretary of State on 13 August.

- 3.1.51 All interested parties have therefore had full opportunity to be consulted and submit representations/evidence as they consider appropriate on the issues at hand. The detailed information contained in the 2020 SHLP Paper itself and all of those submissions (including the HIA and ES Addenda [TR010025-001979 and TR010025-001980]) means that the Secretary of State has more than sufficient information to assess the implications of the 'new discovery'. The Secretary of State will then need to take these submissions into account when determining the application. There is therefore no basis for any assertions of procedural unfairness.
- 3.1.52 The Applicant refutes the contention by third parties that **'the ES is not fit for purpose and/or the HIA conclusions are void given the 'new discovery' and must be revised'**.
- 3.1.53 The Applicant stands by its assessments of Scheme impacts and effects as set out in the ES [APP-044] and the HIA [APP-195]. The Addenda [TR010025-001979 and TR010025-001980] conclude that there will be no new Likely Significant Effects following the 'new discovery' and the impact of the Scheme on the OUV of the WHS as a whole remains unchanged. Heritage consultees including Historic England, Wiltshire Council, the National Trust and English Heritage have provided responses to the Secretary of State on 13th August that confirm the comprehensiveness and robustness of the documentation provided by the Applicant [TR010025-001972; TR010025-001968; TR010025-001975 and TR010025-001970].
- 3.1.54 With regard to the assertion by third parties that **'the 'new discovery' serves to show that the Detailed Archaeological Mitigation Strategy (DAMS) is not fit for purpose'**.
- 3.1.55 On the contrary, the inherent reflexive approach of the DAMS means that it is 'fit-for-purpose' and wholly suited to responding where appropriate to new discoveries, emerging theories, interpretations and methods [TR010025-001981, section 5].
- 3.1.56 The DAMS is founded on research principles, considering the archaeological evidence identified during the evaluation programme and known from other surveys in the area against the themes and research questions set out in relevant published research frameworks. As part of the DAMS, the Scheme-specific Archaeological Research Agenda (ARA) has been developed in consultation with HMAG and the Scientific Committee, who were invited to contribute research themes and questions [TR010025-001951, section 4]. The DAMS is designed to allow new theories and interpretations to influence the research questions that are put forward in SSWSIs and to vary the methods and sampling as archaeological excavations progress, reflecting the results and priorities emerging from fieldwork. The ARA was discussed

at length in the Oral Submissions at Cultural Heritage, Landscape and Visual Effects and Design Hearing on 21 August 2019 [REP8-016, item 5].

- 3.1.57 Key heritage stakeholders including Wiltshire Council, Historic England and the National Trust consider that the DAMS and its Archaeological Research Agenda provide an adequate basis for developing site-specific research questions and SSWSIs.
- 3.1.58 Wiltshire Council noted that *“key scheme documents [...] are comprehensive and compliant [...] The DAMS and forthcoming SSWSIs provide a mechanism for fully assessing any further such features which may be discovered during the mitigation phase on the road line and portals, in the unlikely event that they have not been picked up during the evaluation.”* [TR010025-001968, sections 2.4 & 2.5].
- 3.1.59 Historic England has confirmed that they *“believe that the dDCO, OEMP and DAMS set out a process to ensure that heritage advice and considerations can play an appropriate and important role in the construction, operation and maintenance of the Scheme [...] we consider sufficient safeguards have been built in for the detailed design stage”* [AS-111] and in their response to the Secretary of State on 13th August, stated *“In our opinion the provisions in the Detailed Archaeological Method Statement (DAMS) are sufficient to enable the Site Specific Written Schemes of Investigations (SSWSIs) to draw on the implications of the SHLP research in finalising the detailing of the programme of archaeological mitigation should the Scheme be granted consent. Safeguards have been included within the DAMS and Outline Environmental Management Plan (OEMP) to facilitate the integration of the matters”* [TR010025-001951].
- 3.1.60 The National Trust have stated, *“This reflexive approach, coupled with the promotion of high quality research has the ability to ensure the archaeological mitigation undertaken as part of the Development responds appropriately to any new information, and discoveries in order to appropriately hone both the creation of SSWSIs, and to allow for further modification in light of additional information that comes to light during the course of fieldwork”* [TR010025-001975, para. 6.1.7].
- 3.1.61 With regards to one third party submission that **‘Heritage assessments have not assessed the potential of further discoveries’**.
- 3.1.62 The Applicant notes that it has acknowledged the findings as presented by the Stonehenge Hidden Landscape Project and assessed them at face value. The ES and HIA Addenda conclude that no new Likely Significant Effects have been identified or changes to the overall conclusions regarding the impact of the Scheme on the ‘new discovery’, stated interrelationships, contribution to expressing attributes of OUV and the WHS as a whole following the ‘new discovery’.
- 3.1.63 As stated in the Applicant’s Overarching Response addressing the ‘new discovery’ [TR010025-001981] the archaeological evaluation reports [REP1-039 to REP1-056; REP3-023 & REP3-024], the ES cultural heritage chapter

[APP-044], the HIA [APP-195] and the DAMS [TR010025-01951] take full account of the potential for 'pit' features to contribute to understanding of human activity. The archaeological evaluation undertaken for the Scheme already identified and investigated the large pit-like features within the Scheme boundary. The interpretation of these features as of natural origin (but containing cultural material) is sound, based on the evidence from the evaluations. As far as any additional or wider interpretation that might be entertained in light of the recently published 'new discovery', the interpretation as natural features does not preclude anthropogenic modification and the mitigation strategy for the Scheme, set out in the DAMS [TR10025-001951], allows flexibility to investigate and interpret such features further, taking account of the 'new discovery'.

- 3.1.64 The Applicant does not accept the proposal from Cycling UK **to allow cyclists to use the proposed tunnel between the Longbarrow and Countess junctions.**
- 3.1.65 It is Highways England's policy to separate cyclists and motorists on new trunk roads on safety grounds and the Scheme provides an alternative link for cyclists between the Longbarrow and Countess junctions. The alternative route follows the proposed restricted byway along the former A303 and Stonehenge Road, linking to National Cycle Network (NCN) Route 45, and into Amesbury. Cyclists may then travel along Countess Road to the Countess Roundabout to join the A303 east-bound or continue along NCN Route 45 to Solstice Park Junction, where cyclists are also able to re-join the A303. There is thus an alternative route keeping cyclists separate and safe from traffic on the trunk road and enabling cyclists to travel through Amesbury to get to Countess Roundabout.
- 3.1.66 The Scheme will also provide an extensive network of routes available to cyclists including 10 miles of surfaced restricted byways and bridleways from which motorised vehicles are excluded.
- 3.1.67 In conclusion, and for the reasons set out in its detailed response to Cycling UK's (late) representation, Highways England does not intend the proposed A303 tunnel to be used by cyclists. Moreover, Highways England considers that the (late) representation submitted by Cycling UK does not present any sound or compelling reasons for Highways England to change that intention or to change the Scheme for which Development Consent is now sought.



## 4 Conclusions

- 4.1.1 The SoS requested final comments from Highways England, Heritage Bodies and other recipients, on representations made to, and received by, the SoS by the 13 August 2020. This follows a recent archaeological find within the World Heritage Site and the SoS's consultation on this matter of 16 July 2020.
- 4.1.2 This document has set out the Applicant's Overarching Response to those submissions made to the SoS on the 13<sup>th</sup> August 2020, including reference to supportive submissions as well as responding to "themes" from third parties opposed to the Scheme. The SoS is directed to the Applicant's separate document, that accompanies this Overarching Response, which provides the Applicant's detailed comments on the submissions of third parties opposed to the Scheme.
- 4.1.3 The SoS should note that all of these "themes" have been recurrent topics throughout the examination from those opposed to the Scheme and there are no substantive new points. The Applicant has responded to all of these points previously in great detail throughout the examination.
- 4.1.4 The comments made in the conclusion of the Applicant's Overarching Response to the 'new discovery' [TR010025-001981] still stand:

*"The Applicant considers that the Application documents, and specifically the HIA, ES and DAMS, are comprehensive and have been correctly prepared in accordance with relevant guidance and good practice.*

*The Applicant recognises the WHS as a single asset of the highest significance – see written summaries of oral submissions put at Cultural Heritage hearings on 5 and 6 June 2019 [REP4-030, items 3 (ii) and (vi)]. The HIA and ES submitted with the Application assess the impact of the Scheme accordingly and assign the WHS the highest level of significance ('Very High' – applicable to WHS and features conveying attributes of OUV).*

*The Applicant has considered the contribution of the ['new discovery'] and the pit like anomalies to the OUV of the WHS and the impact of the Scheme on the discovery and the anomalies. The Applicant has prepared an Addendum to the HIA [TR010025-001980] that specifically considers the discovery and its significance, its contribution to the Attributes, Integrity and Authenticity of the WHS, and the impact of the Scheme on the OUV of the WHS as a whole (taking into account the discovery and anomalies), and an Addendum to the ES [TR010025-001979] that assesses the impacts and Likely Significant Effects of the construction and operation of the Scheme on the new discovery, heritage assets potentially related to the discovery, and pit-like anomalies identified elsewhere in the WHS and within the DCO boundary.*

*The Scheme will not adversely affect the physical remains of the suggested monumental structure, or its setting. The suggested discrete large pit-like anomalies across the landscape outside of the Scheme boundary will*

*similarly be unaffected by the Scheme; those suggested within the Scheme boundary will either be protected and retained in situ, or archaeologically excavated and recorded.*

*The HIA Addendum demonstrates that the effect of the Scheme on the WHS as a whole, the Attributes of OUV, its Integrity and Authenticity, as assessed in the Main HIA submitted with the application, would be unchanged. The ES Addendum has not identified any new likely significant effects beyond those already identified in the Main ES submitted with the Application.”*

- 4.1.5 The Applicant finally notes the submissions of heritage bodies again with regards to the documentation submitted by the Applicant.
- 4.1.6 Historic England state *“We consider that the assessments conducted under the Scheme were sufficiently rigorous to inform determination of the Scheme and development of an appropriate and proportionate archaeological mitigation strategy. The recently published research does not change our view of those assessments”* [TR010025-001972, para. 2.4.10].
- 4.1.7 Wiltshire Council note that *“In the Council’s view, the findings do not change the assessment of impact of the A303 scheme on the OUV of the WHS contained within the EIA and HIA. Furthermore, the DAMS and forthcoming SSWSIs provide a mechanism for fully assessing any further such features which may be discovered during the mitigation phase on the road line and portals, in the unlikely event that they have not been picked up during the evaluation.”* [TR010025-001968, section 4].
- 4.1.8 The National Trust state *“In response to the Secretary of State’s request we have also considered the implications for the Applicant’s Environmental Statement (ES), including the Heritage Impact Assessment (HIA), and the proposed Detailed Archaeological Mitigation Strategy (DAMS). In our view there are no substantive implications for the Applicant’s ES, the HIA or the DAMS.”* [TR010025-001975, para. 7.1.3].
- 4.1.9 English Heritage Trust state *“English Heritage considers that the discovery of the pit circuit does not imply that the heritage assessments by Highways England were not rigorous enough... Furthermore, an iterative and reflexive process of assessment for new discoveries is already built into the DAMS for the Development.”* [TR010025-001970, Conclusion 2].

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# A303 Amesbury to Berwick Down

TR010025

Detailed Response Tables to Submissions received by the  
Secretary of State on 13 August 2020

APFP Regulation 5(2)(q)

Planning Act 2008

The Infrastructure Planning (Examination Procedure) Rules 2010

September 2020



Infrastructure Planning

Planning Act 2008

**The Infrastructure Planning (Examination Procedure)**

**Rules 2010**

**A303 Amesbury to Berwick Down**

**Development Consent Order 20[\*\*]**

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**Detailed Response Tables to Submissions received by the  
Secretary of State on 13 August 2020**

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<b>Regulation Number:</b>	Regulation 5(2)(g)
<b>Planning Inspectorate Scheme Reference</b>	TR010025
<b>Author:</b>	A303 Amesbury to Berwick Down Project Team, Highways England

<b>Version</b>	<b>Date</b>	<b>Status of Version</b>
Rev 0	28 September 2020	Additional Submission

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## Foreword

The A303 Amesbury to Berwick Down scheme (“the Scheme”) forms part of a package of proposals for the A303/A358 corridor, improving this vital connection between the South West and London and the South East and including the upgrade of remaining single carriageway sections on the route to dual carriageway. This investment is stated as a priority project in the National Infrastructure Plan and Government’s commitment is confirmed in the Road Investment Strategy (2020-2025).

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

- **Transport** - To create a high quality reliable route between the South East and the South West that meets the future needs of traffic;
- **Economic Growth** - to enable growth in jobs and housing by providing a free flowing and reliable connection between the South East and the South West;
- **Cultural Heritage** - To help conserve and enhance the World Heritage Site and to make it easier to reach and explore; and
- **Environment and Community** - To improve biodiversity and provide a positive legacy for nearby communities.

The objectives would be achieved by providing a high quality, two-lane dual carriageway on the A303 trunk road between Amesbury and Berwick Down in Wiltshire.

The Scheme would resolve traffic problems and, at the same time, protect and enhance the WHS. Key components comprise:

- a) A bypass to the north of Winterbourne Stoke with a viaduct over the River Till valley;
- b) A new junction between the A303 and A360 to the west of and outside the World Heritage Site, replacing the existing Longbarrow roundabout;
- c) A twin-bore tunnel approximately 3km in length past Stonehenge;
- d) A new flyover at Countess roundabout

## Introduction

### Purpose of Report

This report provides Highways England's response to matters raised within representations submitted to, and accepted by, the Planning Inspectorate (the Inspectorate) on behalf of the Secretary of State at the deadline of 13 August 2020.

### Structure of this document

A total of 19 submissions were made to the Inspectorate. This report responds to ten of the submissions made, where Highways England considers that a statement is needed to clarify matters. For each submission, an individual table has been created which provides Highways England's response to each matter raised. Tables have been prepared for submissions made by the following parties:

Amesbury Museum and Heritage Trust

Consortium of Archaeologists and the Blick Mead Project Team

Cycling UK

ICOMOS-UK

Simon Banton

Simon Bradley

Stonehenge Alliance

Suzanne Keene

The Council for British Archaeology

Wiltshire Archaeological and Natural History Society

### The Examination Library

References in this report 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 Amesbury Museum and Heritage Trust

	Matter Raised	Highways England's Response
1.1	<p>1.The latest published finds by the Stonehenge Hidden Landscapes project and the ongoing work by the Blick Mead Team, highlight how undiscovered and significant the wider landscape is and why the World Heritage Site is so vast.</p>	<p>The Applicant acknowledges that understanding of the uses and meanings of the WHS landscape is the subject of a constantly evolving debate: accordingly, the Detailed Archaeological Mitigation Strategy (DAMS) [TR010025-001951], developed in consultation with members of the Heritage Monitoring and Advisory Group (HMAG) and with input from the Scientific Committee, seeks to capture current research questions and thinking as well as cater for that evolving debate. The approach of the DAMS is based on developing site-specific research questions and focusing site decision-making on addressing these. The reflexive and iterative nature of the DAMS provides ample scope to address discoveries during the mitigation programme, and to take account of emerging discoveries and theories within the WHS including the latest published finds by the Stonehenge Hidden Landscapes Project Team and the Blick Mead Project Team.</p> <p>The Applicant recognises the World Heritage Site (WHS) as of the highest significance [see written summaries of oral submissions put at Cultural Heritage hearings on 5th and 6th June 2019, REP4-030, items 3 (ii) and (vi)]. The HIA [APP-195, section 5.7 and table 3] and ES [APP-044, para. 6.3.17 and table 2] submitted with the Application (and their subsequent addenda, TR010025-001979 &amp; TR010025-001980) assess the impact of the Scheme accordingly and assign the WHS, as a whole, the highest level of</p>



		<p>significance ('Very High' – applicable to the WHS and to features conveying the Attributes of OUV).</p> <p>The Applicant, however, does not acknowledge that the landscape along the route corridor and within the Development Consent Order (DCO) boundary is 'undiscovered'. The Applicant has undertaken extensive archaeological evaluations in advance of the DCO application, as set out in the reports submitted to the examination [REP1-039 to REP1-056]. These, alongside extensive research, have established a comprehensive set of baseline reports [APP-196 to APP-219] on which to assess the impact of the Scheme on the historic environment [Environmental Statement (ES) Chapter 6; APP-044] and the Outstanding Universal Value (OUV) of the WHS [Heritage Impact Assessment (HIA); APP-195].</p>
1.2	<p>2. At the Planning Inspectorate hearing Professor Mike Parker Pearson demonstrated how a large percentage of the ploughed soil surface across the site will hold for us and future generations tens of thousands of artefacts which will provide decades of research. Crucially, advances in technology will enable future research to be undertaken of artefacts in situ without destruction or sterilisation of the site.</p>	<p>The Applicant has previously responded with regards to artefacts in the ploughsoil (please refer to item 5.4i of Highways England's Written Summary of its Oral Submissions from Issue Specific Hearing (ISH) 8 [REP8-016]). A suitable approach for the recovery of a representative sample of the lithics within the ploughzone is put forward in the DAMS [TR010025-01971, paras. 6.3.11 to 6.3.20] and will be developed in consultation with Wiltshire Council and Historic England and, for sites within the WHS, HMAG. In some areas, a sample of up to 100% of the artefact content of the ploughsoil may be necessary, combined with a systematic sample to capture background distributions and transitional areas. The strategy will adopt a reflexive approach such that the sample size may be increased locally in response to the results of the systematic sampling. The strategy as set out in the DAMS provides appropriate mechanisms for decision-making to be made and developed throughout the full life cycle of the project with</p>



regards to the sampling of the artefacts within the ploughzone. The approach and the focus of any sampling will respond to the significance of the material recovered and will target mitigation in response to specific research questions.

The Applicant acknowledges that technology is constantly advancing: the DAMS [TR010025-001951], developed in consultation with members of HMAG and with input from the Scientific Committee, seeks to capture current research questions and thinking. The approach of the DAMS is based on developing site-specific research questions and focusing site decision-making based on the significance of the remains uncovered. The reflexive and iterative nature of the DAMS provides ample scope to address discoveries during the mitigation programme, and to take account of emerging discoveries and theories within the WHS and to discuss the use of new technology and scientific techniques [TR010025-001951, see for example paras. 6.3.16-6.3.18, 6.1.24, 6.3.7-6.3.8, 6.3.38-6.3.39 and 6.3.49-6.3.51 for iterative / reflexive approach; and section 8.1 regarding communications].

Wiltshire Council [TR010025-001968, sections 2.4 & 2.5] and Historic England [AS-111; TR010025-001972] consider that the DAMS and its ARA provide an appropriate basis for development of site-specific research questions and SSWSIs. The speculative argument that future technology may discover more information about the WHS or its artefacts is addressed in detail in the Applicant's Comments on Written Representations [REP3-013, para. 21.4.4]. It is unpersuasive to assert that the Scheme should be prevented from being progressed in the face of a speculative argument that future technology may discover more information in this area of the WHS. This is particularly the case having regard to the comprehensiveness of the assessment undertaken and the mitigation measures in place in the DAMS [TR010025-001951].



		<p>The application documents, in particular the Case for the Scheme [APP-294], have set out the need for the Scheme; it is neither appropriate nor a feasible approach to delay or prevent a development on the basis that there could potentially be better technologies in future. Taking that approach, no infrastructure would ever be delivered, despite the need for it. In any event, were future technologies to be developed, the Applicant has built into the Scheme via the DAMS the ability to allow for archaeological remains that are excavated as part of the Scheme works to be preserved in anticipation of further analysis.</p> <p>Furthermore, it is currently clear that publication quality analysis and research of archaeological artefacts is only achieved following careful archaeological excavation (not study in situ), recording, cleaning, conservation, scientific study and analysis.</p>
1.3	<p>3.If consent is however granted for the proposed tunnel with a surface dual carriageway cutting through the site, then the archaeology within the ploughed soil, will, without extensive recording be all but lost and almost certainly unrecoverable.</p>	<p>See response at Point 1.2 above. The Applicant has made provision for the recovery of artefacts from the ploughsoil as part of its DAMS [TR010025-01951, paras. 6.3.11 to 6.3.20]. The matter of ploughzone artefact scatters has been addressed in the Applicant's previous submissions, including ISH2 [REP4-030, 7 (ii)], Comments on any further information requested by the ExA and received at Deadline 4 [REP5-003, 11.2.37; 34.1.2, 34.1.4, 34.1.7 and 34.1.32], Comments on any further information requested by the ExA and received to Deadline 5 and 6 [REP7-021, items 3.3.4, 6.3.1; 13.2.14; 31.1.5; 40.1.1 and 40.1.5]; and in oral submissions put at ISH8 [REP8-016, item 5.4 (i)].</p> <p>The DAMS [TR010025-01951] provides a proportionate and reasonable approach that has fully considered the Scheme impacts on the archaeological resource situated within the order limits and proposes mitigation, including an intelligent and reflexive approach to ploughzone artefact sampling.</p>



		<p>The DAMS makes provision for extensive recording and recovery of archaeological remains including artefacts within the ploughsoil (see above). Archaeological remains will be carefully excavated and recorded to high standards in advance of construction. That material, once published, is then available for reanalysis, re-interrogation and re-interpretation once the archive has been assembled and deposited with a Museum and is therefore not 'lost' or 'unrecoverable'.</p>
1.4	<p>4.A further demonstration of the importance of the site and the need to avoid any further damage is the recent discovery of the site of Queen Eleanor of Provence, Henry III's Queen, who is buried in the grounds of Grade 1 listed Amesbury Abbey, within meters of the proposed raised A303 Countess flyover. She is believed to be the only Queen of England with no marked grave and will create international interest when investigated.</p>	<p>The Applicant understands that the burial place of Queen Eleanor of Provence, Henry III's Queen, was under the High Altar of Amesbury Priory Church, which lies somewhere underneath the current Amesbury Abbey Grade I listed building c.270m south of the existing A303 and the proposed Scheme. However, we are not aware of any discovery of grave.</p> <p>The Applicant's setting assessment [APP-218] and ES [APP-044] have considered the impacts of the Scheme (including the Countess Flyover) on the Amesbury Abbey Grade I listed buildings and its associated Registered Park and Garden (RPG). This is addressed in the Applicant's response to Amesbury Abbey Group [REP3-013, paras. 26.4.22–37. In summary:</p> <ul style="list-style-type: none"> <li>• There would be an impact from the Scheme on the northern boundary and part of the eastern boundary of Amesbury Abbey RPG. However, that impact would not extend far into the RPG due to dense screening by current vegetation.</li> </ul> <p>The settings of the majority of assets (including the Grade I listed Amesbury Abbey) within the park would be unchanged as a result of the Scheme [APP-218, para. 3.4.10].</p>



1.5

5.As has been explained by this trust before at the PINS hearings, the deeds of Stonehenge from 31<sup>st</sup> December 1915 (not the Deed of Gift from Cecil Chubb in 1918) has restrictive covenants which are in the public interest and help preserve and protect the site from any desecration. The proposed tunnel will be in direct breach of these important covenants, covenants that we are told prevented the A303 being dualled past the Stone circle in the late 1960's.

During the Examination of the DCO Application, Highways England set out its position on the question of the existence and applicability of the Deeds of Stonehenge dated 31 December 1915 to the Scheme. Please refer to:

- point (ix) in Highways England's cover letter to its Deadline 1 submission [REP1-001] (which responds to a query raised by Andrew Rhind Tutt), as also replicated in:
- paragraphs 67.4.5 - 67.4.12 of Highways England's Comments on Written Representations submitted at Deadline 3 [Document Reference 8.18; REP3-013].

In summary, Highways England's understanding is as follows:

Stonehenge and the immediate surrounding area are owned by the Department for Digital, Culture, Media & Sport (DCMS). The stone circle, together with a small parcel of adjoining land (known as Stonehenge), was given to the Commissioners of Works, for the benefit of the nation, in 1918. English Heritage currently manages the monument on behalf of the DCMS under section 34 of the National Heritage Act 1983.

Highways England is aware of a historic Deed of Gift made on 26 October 1918 under section 2 of the Ancient Monuments Consolidation and Amendment Act 1913, conveying Stonehenge from its owners at the time, Sir Cecil Chubb and his wife Mary, to the Commissioners of Works, who thus became the owners of it, holding it for the benefit of the nation.

Whilst we note that the Amesbury Museum and Heritage Trust's comment concerns covenants in a Deed dated 31 December 1915, rather than in the Deed of Gift dated 26 October 1918, we

refer here to the 1918 Deed because of its relevant connection with the 1915 Deed.

The 1918 Deed contains four covenants, the third of which seeks to restrict development at and around Stonehenge. It is expressed in these terms: *“Thirdly that no building or erection other than a pay box similar to the Pay Box now standing on the premises shall be erected on any part of the premises within four hundred yards of The Milestone marked “Amesbury 2” on the northern frontage of the premises”*.

The fourth and final covenant imposed by the 1918 Deed required the Commissioners of Works to indemnify Sir Cecil Chubb and his wife Mary for any breach of covenants set out in the deed which had transferred Stonehenge to the Chubbs on **31 December 1915**, following Sir Cecil’s purchase of the monument at auction. This 1915 transfer is understood to be the document to which the Amesbury Museum and Heritage Trust’s comments refer.

The 1918 Deed references the 1915 transfer and associated covenants in these terms: *“Fourthly that the Commissioners of Works will at all times save harmless and keep indemnified the Donors and each of them and each of their estates and effects from and against all proceedings costs claims and expenses on account of any breach or non observance of the covenants by the Donors to the like or similar effect contained in the Conveyance of the premises to the Donors dated the thirty first day of December One thousand nine hundred and fifteen.”*

We now consider the enforceability of these covenants:

- a. In respect of the third restrictive covenant in the 1918 Deed, which seeks to restrict development in the vicinity of the monument, Highways England understands that the DCMS is of the view that the covenant is no longer enforceable.



This is because it (along with the other covenants in the 1918 Deed, including the fourth covenant, cited above), was given simply as a personal covenant; it would not be legally capable of 'running with the land' because it was not expressed as being granted for the benefit of the heirs to, or the successors in title of, the landowner at that time.

- b. A case decided by the Court of Appeal (Civil Division) in 1991 (*R -v- Historic Buildings and Monuments Commission for England [aka English Heritage] ex parte George Firsoff* [1991] Lexis Citation 3354) ("the HMBCE case") corroborated the view, held by DCMS, that the covenants were no longer enforceable because they had been given simply as personal covenants and were not drafted in terms which rendered them capable of 'running with the land'.
- c. The transcript of the HMBCE case states that: "... *the deed contained a number of covenants by the Commissioners with the donors ...As a practical matter it must be assumed that the covenants between the Commissioners and the donors, if they could ever have been enforced as such, can no longer, for one reason or another, be so enforced.*"
- d. The HMBCE case was cited in the concluding statements of the Inspector at the public inquiry into the Highways Agency's (as was) previous proposals to improve the A303 at Stonehenge. The Inspector stated that: "*One objector raised the issue that implementation of the published scheme would mean that access to Stonehenge would be operated on a basis which would conflict with the covenants in the Deed of Gift of Stonehenge to the nation. In response, DCMS states that those covenants are no longer*

*enforceable, a view which has been upheld by the Court of Appeal in a decision reached in 1991. I conclude that this does not represent a basis on which the published scheme can be challenged.”*

Turning now to the availability of the 1915 documentation:

- a. Highways England has endeavoured, without success, to locate a copy of the 1915 covenants contained in the transfer of Stonehenge to Sir Cecil Chubb and his wife on 31 December 1915. No documents held at HM Land Registry in respect of land adjoining Stonehenge would appear to reference the 1915 conveyance to the Chubbs; and the land/property comprising Stonehenge itself is not registered.
- b. Research revealing the response from English Heritage to a Freedom of Information request received in 2018 indicates that no title land deed exists. In English Heritage’s response, the only document referred to in relation to the provenance of Stonehenge as a national monument is the 1918 Deed of Gift from Sir Cecil Chubb and his wife to the Commissioners of Works.
- c. Furthermore, whilst there exists a transcript/summary of the 1915 auction notes taken at the time of Sir Cecil’s purchase of Stonehenge, the transcript merely notes that, as a condition of the sale, the purchaser (i.e. Sir Cecil) “*would be required to ... (illegible) ... to the satisfaction of the vendor’s solicitors and maintain a fence on the western boundary of ... (illegible) ... so as the fence exists at present.*” The



		<p>transcript includes no reference to any restriction or restrictive covenant on the use of the land so conveyed.</p> <p>d. It will be clear from the above that Highways England’s position as regards “<i>the 1915 restrictive covenant attached to the relevant land sale document</i>” is that there is no available information or existing evidence which would have the effect of restricting Highways England’s current proposals to improve the A303 between Amesbury and Berwick Down, in the vicinity of Stonehenge.</p> <p>Accordingly, Highways England does not consider that the proposed tunnel will be in direct breach of restrictive covenants in a Deed dated 31 December 1915.</p>
1.6	<p>6.Highways England have stated the Stonehenge and surrounding land deeds are missing and therefore the covenants are not extant, but this Trust has seen a copy. We would urge the Secretary of State to request Highways England to locate the deeds and ensure the covenants are adhered to.</p>	<p>As explained above, Highways England has previously endeavoured to locate the documentation to which the Amesbury Museum and Heritage Trust refers in its representation. For the reasons set out above, it has not been possible to locate this documentation.</p> <p>Highways England would suggest that the inability of the Amesbury Museum and Heritage Trust to produce the documentation on which it seeks to rely confirms Highways England’s understanding that there is no available information on, or existing evidence of, covenants restricting the promotion and delivery of the Scheme.</p>



## 2 Consortium of Archaeologists and the Blick Mead Project Team

	Matter Raised	Highways England's Response
<b>Representation by Victoria Hutton</b>		
2.1	<p>All of the archaeologists and historians assisting the Consortium are acting pro bono out of real concern for the significant damage which the Proposal will cause the World Heritage Site ('WHS') and sites like Blick Mead. The level of expertise of these archaeologists means that their professional opinions must be given significant weight and cannot be lightly discounted.</p>	<p>The Applicant points the Secretary of State to the responses of Historic England [TR010025-001972, para. 2.4.10], Wiltshire Council [TR010025-001968, section 4], the National Trust [TR010025-001975, para. 7.1.3] and the English Heritage Trust [TR010025-001970, Conclusion 2] that are supportive of the Scheme, the heritage assessments undertaken and the mitigation strategy that the Applicant has put forward and that the 'new discovery' does not change these views. The Applicant would also point to the submissions of eminent archaeologists such as Prof Tim Darvill [TR010025-001964] and Mike Pitts prehistorian and author FSA [TR010025-001967], that are supportive of the Scheme and have both undertaken archaeological excavations and made significant discoveries within the WHS.</p>
2.2	<p>During the Examination the Consortium made a number of representations which focused on: 1. the failure of Highways England ('HE') to understand the WHS as a whole and 2. that surveying techniques were inadequate. In some ways, it is nice to have been proven right in such a short space of time and crucially before the decision has been taken. The new discovery undoubtedly demonstrates that the concerns of the Consortium are well founded.</p>	<p>As stated in the Applicant's Overarching Response addressing the 'new discovery' [TR010025-001981] the Applicant rejects the assertion that the paper relating to the 'discovery' authored by, amongst others, a number of the members of the consortium proves the Consortium's previous submissions 'right':</p> <p>1) The Applicant recognises the WHS as a single asset of the highest significance [see written summaries of oral submissions put at Cultural Heritage hearings on 5th and 6th June 2019, REP4-030, items 3 (ii) and (vi)]. The HIA and ES submitted with</p>



the Application (and their subsequent addenda) assess the impact of the Scheme accordingly and assign the WHS as a whole the highest level of significance ('Very High' – applicable to the WHS and to features conveying attributes of OUV). The Applicant also directs the Secretary of State to its detailed response to ICOMOS-UK [see REP7-021, paragraph 31.1.2] which provides a further explanation as to how impacts and effects have been considered in relation to the whole WHS in support of the Applicant's position that this approach is correct and supported by the relevant guidance.

2) With regard to surveying techniques, as explained at length by the Applicant throughout the examination, these were robust and underlaid an unprecedented level of archaeological investigation undertaken for the Scheme. The development of the archaeological evaluation strategy adopted for the Scheme was undertaken in consultation with the A303 Heritage Monitoring and Advisory Group ('HMAG'), comprising representatives of Wiltshire Council and Historic England as statutory bodies (including the Science Advisor for the South West of England), and the National Trust and English Heritage Trust as major landowners and managers within the WHS. The HMAG is supplemented by a Scientific Committee of independent experts, membership of which includes Professor Gaffney, the principal author of the 2020 SHLP paper on the 'new discovery', and Professor Parker Pearson. As stated in evidence given orally at hearings on 5 and 6 June 2019 [REP4-030, items 5 (i) and (ii)], the archaeological evaluation strategy was developed in consultation with HMAG and the Scientific Committee. Specific contributions from members of the Scientific Committee in respect of ploughzone artefact sampling (surface artefact collection and topsoil test pitting) were adopted as part of the evaluation strategy. The draft

Archaeological Evaluation Strategy Report (AESR) and its accompanying Overarching Written Scheme of Investigation (OWSI) were provided to the Scientific Committee for comment. The AESR and OWSI were approved by Wiltshire Council and HMAG and guided the development by Highways England of Site Specific Written Schemes of Investigation ('SSWSIs'): these SSWSIs were approved, and their implementation on site monitored, by Wiltshire Council and, for sites within the WHS, HMAG. In her oral submission at hearings on 5 and 6 June 2019, the County Archaeologist, Ms Pomeroy-Kellinger confirmed Wiltshire Council's view that the evaluation programme was comprehensive and it is considered that enough information has come to light to give confidence going into the mitigation stage [REP4-030 item 5 (i),(ii)]. In light of the 2020 Stonehenge Hidden Landscape Project (SHLP) Paper, Historic England has also confirmed the quality of the Applicant's geophysical surveys, and that they would have picked up similar features, in its submission dated 13th August 2020 [TR010025-001972, paras. 2.5.2 and 2.5.3].

The Applicant notes that the discovery is based on investigations in 2018 and 2019 of geophysical anomalies identified in surveys undertaken by the SHLP between 2010 and 2014 (see <https://ibi-archpro.org/cs/stonehenge/surveys.html>), and on the results of development-led archaeological investigations at Larkhill and Durrington, about which the authors were presumably aware at the time that some of them were appearing at Issue Specific Hearings on the Scheme. The 'new discovery' (anomalies) lie outside and c.220m to the north of the DCO boundary. The complete dataset from the SHLP surveys in 2010–2014 or more recently has not been released into the public domain, for example through deposition of the data or interpretive reports with the



		<p>Wiltshire and Swindon Historic Environment Record, as might reasonably be expected over such a timescale. As such, it has not been possible for the Applicant to review the underlying data that has supported the 'new discovery' prior to its publication in June 2020. The SHLP project did provide to Highways England, in 2018, data and an interpretative report relating to a restricted study corridor (which included the land contained within the DCO boundary and a limited buffer (50m)), on a commercial basis and subject to an agreement not to distribute further: this report was fully considered by the Applicant in their preparation of the Environmental Statement.</p> <p>Notwithstanding that the data for the 'new discovery' was not available prior to its publication, the Applicant has assessed the results of the 2020 SHLP Paper at face value in its ES and HIA Addenda [TR010025-001979 and TR010025-001980] submitted to the Secretary of State on 13<sup>th</sup> August. The Addenda conclude that there were no new Likely Significant Effects and No Change to the overall conclusion of the HIA and the impact from the Scheme on the OUV of the WHS as a whole.</p> <p>Given this, it is clear that the Applicant's approach to archaeological surveys, evaluation and assessment is robust.</p>
2.3	<p><i>Implications of the new discoveries for understanding the significance of the WHS</i></p> <p>The recent discovery of the pit structure has profound implications for understanding the significance of the WHS. These are broadly two-fold:</p> <p>The pit structure adds considerable weight to the argument that the WHS cannot be viewed as a collection of discrete</p>	<p>Regarding the “<i>argument that the WHS cannot be viewed as a collection of discrete assets rather than [sic] the totality and interrelatedness of the features</i>”, the Applicant responds that this is a misrepresentation of the ICOMOS 2011 Heritage Impact Assessment methodology and the Applicant's Heritage Impact Assessment [APP-195]; the Applicant has responded to this fully in previous responses to the Examination [see for example REP7-021, para. 31.1.6]. This argument is unfounded, as the Applicant's</p>



	<p>assets rather than the totality and interrelatedness of the features (both above and below ground) together constitute the Stonehenge landscape and underpin attributes of OUV;</p>	<p>HIA deals with the wider context at length, including spatial, topographic and chronological relationships; inter-relationships and contextual associations between individual assets, Asset Groups and areas; and the articulation of the wider prehistoric landscape. The HIA considers the wider impacts of the Scheme upon the Attributes that convey the OUV of the WHS, its Integrity and Authenticity in extensive detail [APP-195, sections 6 &amp; 9–12].</p>
<p>2.4</p>	<p>The fact that the structure is formed of ‘pits’ highlights that other such pits within the WHS cannot be discounted as having heritage significance on the basis that they are assumed to be natural features.</p>	<p>As stated in the Applicant’s Overarching Response addressing the ‘new discovery’ [TR010025-001981], the archaeological evaluation reports [REP1-039-056], the cultural heritage chapter of the Environmental Statement [APP-044], the Heritage Impact Assessment for the Scheme [APP-195] and the Detailed Archaeological Mitigation Strategy (DAMS) for the Scheme [TR010025-01951] take full account of the potential for ‘pit’ features to contribute to understanding of human activity. The archaeological evaluation undertaken for the Scheme has successfully identified and investigated the large pit-like features within the Scheme boundary. The Applicant considers that the interpretation of these features as of natural origin (but containing cultural material) is sound, based on the evidence from the evaluations [see the Applicant’s Overarching Response submitted on 13<sup>th</sup> August 2020 [TR010025-001981, sections 2.4 - 2.7]. As far as any additional or wider interpretation that might be entertained in light of the recently published discovery is concerned, the interpretation as natural features does not preclude anthropogenic modification and the mitigation strategy for the Scheme, set out in the DAMS [TR10025-001951], allows flexibility to investigate and interpret such features further, taking account of the ‘new discovery’.</p> <p>The Applicant has made provision for the recording of ‘pits’, including anthropogenic features and features of natural origin, in</p>



the DAMS [TR10025-001951]. The DAMS [TR10025-001951, para. 6.3.42] already provides for the investigation of these and other such features, where impacted by construction. Paragraph 6.3.42 states (emphasis added), “Within the WHS, pits, post-holes and other isolated features (including natural features that have been shown to contain archaeological remains) will be completely (100%) excavated (unless otherwise agreed in consultation with Wiltshire Council, Historic England and, for sites within the WHS, HMAG). Outside the WHS, these types of feature will normally be completely (100%) excavated (unless otherwise agreed in consultation with Wiltshire Council, Historic England and, for sites within the WHS, HMAG as part of the iterative process) (see paragraph 6.1.24 and section 8.1); half-sectioning of features may be adopted, in consultation with Wiltshire Council, subject to the significance of the remains and the research questions identified in the SSWSIs. The significance of the remains and their potential to contribute to the OUV of the WHS will be considered in consultation with Wiltshire Council and Historic England (and, for sites within the WHS, HMAG) in determining the sample size to be excavated”. This DAMS provision ensures that solution hollows or other natural features encountered during the mitigation programme and shown to contain archaeological remains will be subject to archaeological investigation.

2.5 The fact that a large part of the WHS ought to be seen as a single entity is highlighted by the paper by Gaffney, Baldwin and Garwood appended to these submissions. As that paper highlights:

‘The discovery of the Durrington pits, which appear to provide a similar boundary function, albeit uniquely defined by massive pits, may confirm the position that the bounding of very

With regards to considering the WHS as a single entity, this point has been responded to at length previously during examination, for instance at Written Question G.1.1 [REP2-021], as well as the response to agenda item 3vi, 4i, 4ii and 4iii in the oral submission report from ISH2 [REP4-030] and appendix A of that oral submission report. These submissions detail the correct application of the World Heritage Convention as part of the UK's legislative and policy framework, and discuss ICOMOS Guidance,



large spaces is a key characteristic of the landscape that has not been fully appreciated previously.

The underlying visual property of the Stonehenge Envelope is an important point when considering the nature of such territories. Stonehenge clearly demonstrates the capacity of pre-existing monuments to structure the later landscape at an extreme scale, and through the tendency for Bronze age monuments to cluster at the edges of horizons viewed from individual monuments (figures 3 and 4). As such, this is primary evidence to show that a large area of land was directly associated with the monument, and that such areas possessed a contemporary, and interrelated, significance and value.' (p.1).

which identifies that the process of assessing the impact of the Scheme on the WHS requires consideration of harm against benefits.

In brief, in accordance with ICOMOS HIA guidance, both positive and negative impacts are considered against attributes of OUV integrity and authenticity and a judgment arrived at on the overall significance of effect, and it should also be noted that the Scheme has been designed to avoid assets that contribute significantly to the OUV of the WHS. This approach has been followed in the HIA [APP-195] and the HIA Addendum [TR010025-001980].

The Applicant also directs the Secretary of State to a similar line of argument by ICOMOS UK and the Applicant's detailed response to this [REP7-021, para. 31.1.2] which provides a further explanation as to how the attributes of OUV, Integrity and Authenticity have been considered in relation to the whole WHS in support of the Applicant's position that this approach is correct and supported by the relevant guidance.

The HIA Addendum [TR010025-001980] focuses on the nature of the 'new discovery', its contribution to the Attributes expressing the Outstanding Universal Value (OUV) of the WHS, Integrity and Authenticity; its relationship to known heritage assets, Asset Groups and the WHS landscape. It assesses the impacts and effects of the Scheme on the 'new discovery', on known heritage assets potentially related to the discovery. The HIA Addendum assesses the impacts and effects of the Scheme on the Attributes of the OUV of the WHS and on the Integrity and Authenticity of the World Heritage Site (WHS). This includes assessment of the setting and relationships between assets and asset groups, including the newly published features, within the visual envelope of the WHS.



2.6

Gaffney, Baldwin and Garwood conclude:

‘1) Previous research suggests that that Stonehenge is associated with a territory, the Envelope, and that this, in part, is defined through a visual structuring of monument placement at horizon edges

2) Earlier, detailed study further suggests that the majority of known major Neolithic monuments within the Stonehenge landscape had a statistical impact on later barrow placement. This suggested that the landscape is highly structured and underpinned by a complex set of visual relationships

3) The recent discoveries at Durrington and Larkhill continue this pattern and key barrow groups surrounding Stonehenge link that monument with the Durrington complex.

4) The route of the Stonehenge Avenue reveals a complex relationship with both Stonehenge and the area associated with Durrington and its pit circle. It appears that one purpose of the processional way is to link these two monument groups visually.

5) Given these links, it may be best to view both Stonehenge and Durrington, and their attendant monuments, as a single entity

6) The impact assessment of the current road proposals does not fully appreciate this relationship and specifically the eastern sector of

The Applicant disagrees with the Consortium of Archaeologist’s comment that “the impact assessment of the current road proposals does not fully appreciate this relationship and specifically the eastern sector of the scheme”.

1) The HIA [APP-195] notes the “strong visual relationship between Stonehenge... and the inner ring of barrow cemeteries on the near horizon”, going on to note various theories regarding the physical and spiritual meanings of bounded spaces, which “may have been intended to create or reinforce associations with aspects of the natural landscape that were imbued with meaning by prehistoric communities.” [APP-195, para. 6.9.19–27]. The HIA also assesses the attributes of setting, intra-group relationships and wider landscape context of asset groups and isolated and discrete assets [APP-195, pages 177–485].

2) The relationship between Neolithic monuments and the placement of Bronze Age monuments is considered throughout the HIA, which notes “It has been widely observed that the spatial and visual associations between round barrows and other pre-existing ceremonial and funerary monuments implies a degree of intentionality in terms of their siting” [APP-195, para. 6.9.16]. It goes on to note, “In some instances, the barrows may have been constructed directly above earlier hengiform, or related types of monument (e.g. Gaffney et al. 2012; Bowden et al. 2015, pages 35–6). Amadio and Bishop (2010, 27) state that ‘Each burial or new round barrow was placed deliberately with consideration for existing burials, other monuments and natural features, in locations that were in harmony with the values and significances perceived at that particular time.’” [APP-195, para. 6.9.16].

3) These matters are already covered in the assessment of the Scheme’s impacts. The Main HIA [APP-195] acknowledges



the scheme.

The full impact of the road proposal on the unified Stonehenge/Durrington complex, the Avenue route and comparable features elsewhere in the landscape should be re-assessed to consider the complex issue of intervisibility that is a key characteristic of the Stonehenge landscape and to ascertain the full impact of disrupting the key sightlines of the Stonehenge/Durrington complex.’

theories that link Stonehenge with Durrington Walls, noting “Parker Pearson and Ramilisonina (1998) have speculated that there was a dualistic relationship in which Stonehenge was associated with the dead, whilst Durrington Walls was seen as the land of the living, with the Avon forming part of a processional route between the two.” [APP-195, 296]. With regard to the Larkhill Causewayed Enclosure [APP-195, pages 438–443], the HIA notes “The causewayed enclosure is a major discovery, which will lead to a more refined understanding of the development and wider context of the cultural landscape encapsulated by the WHS boundary”. The HIA Addendum [TR010025-001980]:

- assesses the significance of the 'new discovery' in terms of its contribution to Attributes expressing the Outstanding Universal Value (OUV) of the WHS, Authenticity and Integrity, and assesses potential Scheme impacts upon their fabric and setting, in accordance with ICOMOS Guidance on HIA (ICOMOS 2011);
- considers the temporal and spatial relationships of the 'new discovery' with known archaeological assets and Asset Groups, topographical aspects, landscape layout and astronomical alignments of the WHS; and
- considers the character, interpretation and distribution of other large pit-like geophysical anomalies in the landscape, particularly those located within the DCO boundary and in the immediate vicinity of the Scheme.

4) Both the Stonehenge Avenue (AG27) and the Durrington Walls Southern Circle Avenue (AG33) are considered in the HIA, in terms of their significant astronomical alignments [APP-195, section 6.15], dynamic (changing) visual interconnections [APP-

195, pages 343–56 and 396–406]. The HIA notes that “The Avenue may have been part of a larger and more complex composition of ceremonial monuments, in which Stonehenge was linked, via the monument, to the Avon and thence to the henge complex at Durrington Walls (Parker Pearson and Ramilisonina 1998).” [APP-195, page 351]

5) With regard to considering Stonehenge and Durrington and their attendant monuments as a single entity, the ES and HIA process considers Attributes which convey OUV and isolated features to large asset groups which express these Attributes across the whole WHS and beyond its current boundary. Regarding the ‘single entity’ argument (whether part of the WHS as discussed at this point by Victoria Hutton (in her statement ‘it may be best to view both Stonehenge and Durrington, and their attendant monuments, as a single entity’), or as a single entity in its own right) see the Applicant’s response at Point 2.5 above. This approach is not consistent with the accepted and uniformly followed ICOMOS guidance, which was the basis for the Applicant’s HIA.

6) Regarding the ‘single entity’ argument (whether part of the WHS as discussed at this point by Victoria Hutton (in her statement ‘it may be best to view both Stonehenge and Durrington, and their attendant monuments, as a single entity’), or as a single entity in its own right) see the Applicant’s response at Point 2.5 above. This approach is not consistent with the accepted and uniformly followed ICOMOS guidance, which was the basis for the Applicant’s HIA.

With regards to the assessment of impacts from the eastern portal and approach road, these are described in the ES [APP-044, paras. 6.9.18, 6.9.19, 6.9.25, 6.9.28, 6.9.30, 6.9.31 and 6.9.36] and the HIA [APP-195, sections 6.9 and 6.10 and sections 9.2, 9.3



and 9.4]. The existing A303 surface road severs the line of the Avenue; imposes visual and audible intrusion; produces light pollution; directly intrudes in the solstitial alignment of the Avenue and Stonehenge, and in views from the Sun Barrow to the south-west; and intrudes in the backdrop of potentially deliberately constructed views of Stonehenge and other monuments when travelling along the Avenue. One of the key cultural heritage benefits of the Scheme is reconnecting 'The Avenue' – an ancient ceremonial processional route currently severed by the A303. The scheme would reduce severance, reuniting the Avenue, where it is currently severed by the A303, and removing the visual and aural impact of the road and traffic to a very large degree. The scheme would result in the partial restoration of the midwinter sunset solstitial alignment. The road would still be visible in some views, including those to the east towards Vespasian's Camp and Countess Farm Barrows - and the location of the 'new discovery', but the eastern portal entrance would be concealed at the head of a dry valley and under a grassed canopy. Much of the existing surface dual carriageway between Stonehenge Road and Vespasian's Camp would be removed and replaced with chalk grassland, including the point where the Avenue is severed by the current road.

The ES Addendum [TR010025-001979] and HIA Addendum [TR010025-001980] assess potential scheme impacts on the 'new discovery', noting that there would be no direct, permanent physical impact on any part of the 'new discovery', or upon related sub-surface deposits, due to the Scheme. The use of the retained cutting, the canopy and the positioning of the portal in a dry valley in the landscape will limit the impacts to the setting and therefore the low contribution this makes to the significance of the 'southern



arc' of anomalies. The Scheme will not entail the severance of any stated relationships. A Neutral effect is assessed for the 'new discovery', suggested to be a monumental structure', derived from No Change to potentially Very High value assets.

The ES Addendum has not identified any new likely significant effects beyond those already identified in the ES submitted with the Application. Taking into account the 'new discovery', the HIA Addendum concludes that the discovery does not change the assessment of Scheme impacts on the WHS as a whole set out in the Main HIA.

7) In order to verify that the 'new discovery' and its implications do not alter the conclusions of the HIA, the Applicant has prepared an Addendum [TR010025-01980] to the HIA (taking the preliminary conclusions of the paper at face value) that specifically considers the discovery and its significance, its contribution to the Attributes, Integrity and Authenticity of the WHS, and the impact of the Scheme on the 'new discovery' and on the OUV of the WHS as a whole. The Applicant has also prepared an ES Addendum [TR010025-001979] assessing the impact of the scheme on the 'new discovery' and considering comparable large pit-like features elsewhere in the landscape that conclude that there were no new Likely Significant Effects and No Change to the overall conclusion of the HIA and the impact from the Scheme on the OUV of the WHS as a whole. Impacts on the Stonehenge envelope and the Avenue are considered in the ES [APP-044] and HIA [APP-195]. The Applicant has considered interrelationships, intervisibility and key sightlines (including between Stonehenge and Durrington) throughout their assessment (see Point 2.3 above).



<p>2.7</p>	<p>The import of the pits and the implications of the discovery for other pits within the WHS (including within the road line) is dealt with at paras 2 and 3 (and figures 1 and 2) of Paul Garwood’s paper at TR010025-001960.</p>	<p>The archaeological evaluation and assessment undertaken for the Scheme did identify and investigate the large pit-like features within the Scheme boundary that are cited by Mr Garwood, as well as similar features within the Scheme boundary. The Applicant's interpretation of the features cited by Mr Garwood as of natural origin (but containing cultural material) is sound, based on the evidence from the evaluations (including geophysical survey, borehole and auger survey and trial trenching) [see REP1-045 &amp; 046; REP1-042 &amp; 043; REP1-049 &amp; 050; REP1-051] and the Overarching Response submitted 13<sup>th</sup> August 2020 [TR010025-001981, section 2.5].</p> <p>In order to verify that the 'new discovery' and its implications do not alter the conclusions of the ES and the HIA, the Applicant has prepared ES and HIA Addenda [TR010025-001979 and TR010025-001980]. These conclude no new Likely Significant Effects and No Change to the overall conclusion of the HIA and the impact from the Scheme on the OUV of the WHS as a whole following the 2020 SHLP Paper.</p>
<p>2.8</p>	<p><i>Implications of the new discoveries for understanding the impact of the Proposal and work done by Highways England ('HE')</i></p> <p>First, the new discovery (together with significant new results at Blick Mead) further emphasises the failure of HE to employ surveying techniques which ought to be required within the WHS, an asset of the highest significance. The Consortium reminds the Secretary of State that the World Heritage Convention ('WHC') requires 'identification, protection, conservation, presentation and transmission to future generations' of</p>	<p>The Applicant’s surveying techniques are neither inappropriate nor flawed, as explained in the Applicant’s Overarching Response addressing the ‘new discovery’ [TR010025-001981, section 2], and the Applicant has responded to this further in its response to Paul Garwood below at Point 2.23 below.</p> <p>With regards to NNNPS and WHC Compliance, see the Applicant’s Overarching Response submitted 13<sup>th</sup> August [TR010025-001981, section 6.3] that outlines that the Applicant has addressed points associated with this throughout examination. This states:</p>



the WHS. In particular, the UK is required to do 'all it can to this end, to the utmost of its own resources' (art.4). Further, art. 5 of the WHC requires the UK to 'endeavour, in so far as possible, and as appropriate' to 'develop scientific and technical studies and research to work out such operating methods as will make the State capable of counteracting the dangers that threaten its cultural or natural heritage' and to 'take the appropriate legal, scientific, technical, administrative and financial measures necessary for the identification, protection, conservation, presentation and rehabilitation of this heritage'.

Para 5.1226 of the NPS for National Networks states that where 'the development is subject to EIA the applicant should undertake an assessment of any likely significant heritage impacts of the proposed project as part of the Environmental Impact Assessment and describe these in the environmental statement'.

The paper by Paul Garwood appended to the Consortium's submissions at (TRO010025- 001960) highlighted that the new discoveries make clear that the techniques used by HE are not fit for purpose (see para.4 in particular). In his latest paper, Paul Garwood has expanded on this issue. He explains persuasively the problems with HE's techniques both in terms of geophysical survey and trial-trenching evaluation (see parts 2.1 and 2.2). Damningly he states, *inter alia*:

'Geophysical mapping of sub-surface features and deposits along the road corridor is inadequate...'

*"The Applicant has previously responded, in detail, on the Scheme's compliance with the World Heritage Convention (WHC), including with articles 4 and 5 of the WHC – please see, for example:*

- *the Applicant's response to ExA's Written Questions – General and Cross-topic G.1.1 [REP2-021];*
- *the Applicant's Comments on Written Representations [REP3-013], particularly paragraphs 21.4.8-21.4.16 in response to the Council for British Archaeology and paragraphs 60.2.33-60.2.36 in response to the Blick Mead Project Team;*
- *the Applicant's Comments on Any Further Information received at deadline 4 [REP5-003], particularly item 11.2.25 in response to the Stonehenge Alliance;*
- *the written summaries of oral submissions put at Cultural Heritage hearings on 5 and 6 June 2019, particularly in response to agenda items 3(i), 3(v), 3(vi) and appendix A [REP4-030]; and*
- *finally, the written summaries of oral submissions put at Cultural Heritage hearings on 21 August 2019, particularly in response to agenda items 3.1(i) and 3.2(ii) [REP8-016].*

*The Applicant does not consider that the findings of the 2020 SHLP paper – which are considered in detail in the ES and HIA Addenda and concluded not to result in new likely significant effects or impacts on the WHS as a whole – or the submissions of the Blick Mead Project Team, Consortium of Archaeologists or the Stonehenge Alliance on 25 and 26 June 2020 raise any issues that bring into doubt or would cause a change to the Applicant's previous submissions on this point. The Scheme does not breach the WHC and is in full compliance with the UK's international legal obligations.*



	<p>‘Highways England and their archaeological contractors have no comprehensive, seamless, 3D mapping of sub-surface evidence or any means of assessing geophysical data based on multi-sensor survey techniques.’</p> <p>‘...the DAMS relies on single-sensor survey. This provides insufficient baseline information for archaeological decision-making and risks methodological errors by failing to appreciate the number, density, morphologies, scales or complexity of the sub-surface features that more effective application of multiple techniques would reveal.’</p> <p>‘The reliance on trial trenching by Highways England contractors to evaluate both ploughzone/topsoil evidence and the presence/character of sub-surface features, is not very effective: this method is of limited value for gaining a sound understanding of both the impact of the road scheme on the archaeological resource or its true character and complexity.’</p> <p>‘It is also worth noting again that the one large pit/solution hollow superficially sampled in a test trench in the western portal corridor, Feature 24105 (Highways England 2019a), is not deeply buried (it is plough-truncated) yet it does not seem to have been detected even by magnetometry.’</p>	<p><i>The conclusions presented in the HIA Addendum and ES Addendum show that the Scheme maintains conformity with the NPS. As such, it has not been considered necessary to update the National Policy Statement for National Networks Compliance Tracker [AS-142]. This is on the basis that the HIA Addendum concludes that the discovery does not change the assessment of Scheme impacts on the WHS as a whole set out in the Main HIA and the ES Addendum has not identified any new likely significant effects beyond those already identified in the Main ES.”</i></p>
2.9	<p>That HE’s surveying techniques have fallen far short of what ought to be required in the WHS is also underscored by the submission of Professor Jacques appended here. He makes the point that at the Eastern Portal, the</p>	<p>As set out above, the Applicant’s surveying techniques are neither inappropriate nor flawed, as explained in the Applicant’s Overarching Response addressing the ‘new discovery’ [TR010025-001981, section 2]. The Applicant has responded to</p>



	<p>differences between finds in an area with 100% sampling vs. 3-4% is stark. He writes:</p> <p>'The difference in adopting a sampling strategy of 100% at Blick Mead and 3-4% on the Countess side, locations only separated by about two hundred metres, is stark. The Blick Mead results have so far revealed a preserved and long-lived Mesolithic occupation (c.8000-4000 BC), ancient DNA of a diverse variety of flora and fauna, a late Mesolithic tree-throw shelter and occupation surface, well-preserved aurochs' hoofprints, plus a tightly dated laid stone surface into the spring. Thanks to TerrACE, we now know there are also preserved post- Mesolithic soil sequences which potentially take the WHS narrative much further. The Countess area investigations by the Applicant are completely inadequate by comparison, yet are the basis for this area of the WHS being given a low archaeological value in the HIA.</p>	<p>this point further in its response to David Jacques below at Point 2.35.</p>
2.10	<p>Although archaeological knowledge will always be developing/improving (see Paul Garwood at section 3), at a minimum HE ought to be required to use best available techniques as are currently available in order to assess the heritage significance and impact of the scheme as far as possible at the date of the decision. Particularly so given the WHS' status.</p> <p>There can be no doubt that the inadequacy of HE's techniques has led to a failure to understand the significance of the WHS and the implications of the Scheme. In layman's terms, it has already been demonstrated that HE has missed a significant feature within the WHS, the question remains as to what else has</p>	<p>As set out above, the Applicant's surveying techniques are neither inappropriate nor flawed in the context of the WHS's status, nor has its archaeological evaluation strategy resulted in features being 'missed', as explained in the Applicant's Overarching Response addressing the 'new discovery' [TR010025-001981, section 2]. The Applicant has responded to these points further in its response to Paul Garwood below at Points 2.22 and 2.24.</p> <p>Regarding 'missing a significant feature' in the form of the 'new discoveries' that are suggested to be a 'monumental structure', none of these anomalies fall within the DCO boundary or within the 50m data buffer of information supplied to the Applicant by the SHLP team under licence and commercial agreement. The features will not be physically impacted by the Scheme. To ensure</p>



been missed. Equally, the fact that the DAMS does not require best available techniques and 100% sampling means that, should the Scheme go ahead, that which will be destroyed may not even be recovered or recorded (see part 2.3 of Paul Garwood's paper attached). The scheme ought to be rejected on the basis that HE's heritage assessment has not used techniques commensurate with the status of the WHS.

that the impacts of the Scheme on these are considered in an appropriate manner, the Applicant has undertaken Addenda to the ES and the HIA [TR010025-001979 and TR010025-001980] that consider the findings at face value. The ES and HIA Addenda conclude no new Likely Significant Effects and No Change to the overall conclusion of the HIA and the impact from the Scheme on the OUV of the WHS as a whole following the 2020 SHLP Paper.

With regard to Ms Hutton's question regarding 'what else has been missed' the Applicant stands by its comprehensive and robust archaeological evaluations which have been undertaken at an unprecedented level of detail which are entirely commensurate with the status of the WHS. In her oral submission at hearings on 5 and 6 June 2019, the County Archaeologist, Ms Pomeroy-Kellinger confirmed Wiltshire Council's view that the evaluation programme was comprehensive and it is considered that enough information has come to light to give confidence going into the mitigation stage [REP4-030 item 5 (i),(ii)]. In light of the 2020 Stonehenge Hidden Landscape Project (SHLP) Paper, Historic England has also confirmed the quality of the Applicant's geophysical surveys, and that they would have picked up similar features, in its submission dated 13th August [TR010025-001972, paras. 2.5.2, 2.5.3 and 3.7].

With regard to Ms Hutton's points regarding techniques, the comprehensive Detailed Archaeological Mitigation Strategy (DAMS) [TR010025-001951], developed in consultation with HMAG, and with input from the Scientific Committee, seeks to capture current research questions and is reflexive and iterative in order to respond to developing theories, interpretations and technologies as the design of the archaeological mitigation works is progressed, and to address new discoveries during the mitigation programme. HMAG, and with input from the Scientific



Committee, seeks to capture current research questions and is reflexive and iterative in order to respond to developing theories, interpretations and technologies as the design of the archaeological mitigation works is progressed, and to address new discoveries during the mitigation programme. Heritage consultees have also confirmed in their submissions that the DAMS is fit-for-purpose and that the dDCO, Outline Environmental Management Plan (OEMP) and DAMS ensure that heritage advice can play an appropriate and important role in relation to the Scheme detailed design [see Historic England’s closing statement to the Examination - [AS-111, TR010025-001736, para. 1.7].

Specifically regarding 100% sampling of ‘pit-like’ or natural features similar to those published in the 2020 SHLP Paper, as alluded to above, the DAMS [TR10025-001951] provides for development of site specific research questions with input from specialists through SSWSIs; for natural features containing cultural material to be fully (100%) excavated; and for iterative development of strategies on site to respond to the nature and significance of the features encountered. Where large ‘pit-like’ features are encountered during the mitigation process, the DAMS provides at paragraph 6.3.42 for pits and other isolated features (including natural features that have been shown to contain archaeological remains) to be completely (100%) excavated. The DAMS is therefore fit for purpose.

2.11	<p>Second, the new discovery of the pits emphasises that the WHS cannot be understood as isolated groups of assets in the landscape. Rather, the entirety of the site needs to be considered as one with an understanding of the interrelationships between the features within it. The new discovery underscores how important the relationships are between the various features within the</p>	<p>As explained above, the Applicant has considered the WHS as a whole in its HIA, thus appropriately considering the potential impacts of the Scheme upon it. This is consistent with the requirements of the NNNPS.</p> <p>The Applicant has responded to this point further in its response to Paul Garwood below at Point 2.19.</p>
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WHS. This is emphasised by the papers of Gaffney, Baldwin and Garwood, Brian Edwards and Paul Garwood appended herewith.

It should not be forgotten that the concern of national policy in the NPS is directed at particular heritage assets. Here, the asset is the WHS as a whole it is not simply the Stonehenge circle. The approach which HE has taken in its Heritage Impact Assessment ('HIA') which focusses heavily on individual asset groupings and fails to consider the significance of their interrelationships is therefore undermined and cannot be relied upon. This is dealt with clearly in Paul Garwood's paper (part 1) which sets out that the new discovery has highlighted the interrelationship of features in the landscape and how, in failing to appreciate this (and how it underpins OUV), the HIA is not fit for purpose. He states *inter alia*:

'Such structuring of the prehistoric landscape is most immediately visible to us in terms of monumental architecture (such as enclosures, avenues, lines of funerary monuments, etc), but is also evident in the wider spatial patterning of activities in all archaeological settings. We also know that such large-scale total-landscape organizations of monuments and practices changed on several occasions over time and cannot be reduced to a single 'model' of the prehistoric landscape (e.g. see Darvill 2005). These fundamental conditions of the evidence are not recognized by Highways England as the basis for developing their HIA methodology: by focusing on particular sites, the fundamental

	<p>importance of the <i>extensive</i> spatiality and the <i>interrelatedness</i> of prehistoric landscape organizations, monuments, social practices, sensory perceptions and meanings, is marginalized or ignored altogether.</p> <p>The unsuitability of the Highways England approach has been brought into stark focus again, however, by the discovery of the Durrington massive pits structure (Gaffney <i>et al.</i> 2020a; cf. Garwood 2020). This not only highlights the coherently organized and integrated character of the prehistoric ceremonial landscape, but also demonstrates that large-scale physical and cognitive ordering of tracts of the Stonehenge landscape effectively created vast monumental structures that had an existence that far transcended any one monument component.’</p>	
2.12	<p>Paul Garwood goes on to provide particular examples of how HE have failed to assess the impact on OUV in relation to attributes five and six together with ‘integrity’ and ‘authenticity’. In short, the methodological shortcomings of the HIA have led to the under-reporting of heritage harm. Paul Garwood concludes:</p> <p>‘The OUV attributes of the WHS are based largely on an understanding of the Stonehenge as a contiguous, structured, whole thing. To destroy parts of this entity, on the basis of some ‘heritage value’ accountancy rationale (i.e. damage cost valuation in comparison with supposed ‘benefits’) can only weaken the OUV of the WHS, and seriously compromise the past cultural landscapes we aim to preserve, understand, and present to the public. Despite the claims made in the HIA, the discussion in</p>	<p>The Applicant does not consider that the HIA contains any methodological shortcomings or any under reporting of heritage harm – as set out above, it was carried out in accordance with all applicable guidance, particularly in respect of the assessment of impacts on each of the seven Attributes, Integrity and Authenticity of the OUV of the WHS. Moreover, its assessment is an inherently precautionary one as stated in the methodology for the HIA [APP-195, paras. 5.9.4 and 5.9.5]:</p> <p><i>“When assessing a range of impacts on heritage assets, the HIA has taken into account both positive and negative impacts to arrive at an overall conclusion regarding the effect of the Scheme on the asset or group of assets. In making this balanced judgement, a precautionary approach has been adopted so as to avoid overstating positive impacts and beneficial effects where these arise.</i></p>



	<p>section 1.2. demonstrates that the proposed A303 road scheme represents a significant threat to the OUV attributes, Integrity and Authenticity of the WHS. The HIA, therefore, is a seriously deficient document that provides no sound basis for evaluating the effects of the proposed scheme on the WHS or its OUV attributes. It should be discarded, and a more credible assessment framework developed instead based on a sound understanding of the unique prehistoric cultural heritage of the Stonehenge landscape.'</p>	<p><i>The same approach is also applied when considering the impacts and effects of the Scheme on individual Attributes of OUV and the Integrity and Authenticity of the WHS. Again, a precautionary approach has been adopted."</i></p> <p>The Applicant has responded to this point further in its response to Paul Garwood below at Points 2.20 and 2.21.</p>
2.13	<p>Third, the fact that the HIA does not take into account the new discovery or the interrelationship between the various assets (the significance of which is underscored by the new discovery) means that the Environmental Statement ('ES') does not meet the requirements of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as set out at paras 8 and 9 of the Consortium's submissions at TRO010025-001960). The DCO cannot therefore be made without breaching those Regulations.</p>	<p>The Applicant has prepared an ES Addendum and HIA Addendum that assesses the impacts and Likely Significant Effects of the construction and operation of the Scheme on the 'new discovery' and on isolated large pit-like anomalies identified elsewhere in the WHS and within the DCO boundary in figure 9 of the 2020 SHLP paper, including interrelationship between assets. The Addenda conclude that no new Likely Significant Effects result from the effects of the Scheme on the 'new discovery' and the overall conclusion of the HIA, that the Scheme results in a Slight Beneficial effect on the WHS and sustains its OUV, is unchanged.</p> <p>This further work undertaken therefore further demonstrates and confirms the compliance of the Scheme with the 2017 EIA Regulations and that it is a complete and thorough assessment, and contains all "information reasonably required for reaching a reasoned conclusion on the significant effects of the development" in line with Regulation 14 of the 2017 EIA Regulations. The Secretary of State therefore has all the information and assessment required to make the DCO in compliance with those Regulations.</p>



2.14

Fourth, the new discovery casts considerable doubt over the decision over where the tunnel portals should be sited. The new discovery has particular significance for the Eastern Portal. As Gaffney, Baldwin and Garwood state:

‘Together, these detailed studies strongly suggest that the significance of the Avenue is to integrate the Stonehenge and Durrington monument complexes as a single unit. The tendency for impact assessment of the Stonehenge landscape to treat monuments individually therefore misses a critical characteristic of the Stonehenge landscape. This is specifically illustrated in [figure 7](#). Here, the inset within the figure illustrates the likely visual connections of the eastern sector of the road scheme with the Durrington complex. Consequently, there is a real need for an assessment that treats the Stonehenge and Durrington groups as a single unit. If this is not undertaken, uncritical development, as proposed by the A303, will unwittingly cause substantive damage to how we understand and appreciate this unique landscape.’

Once the significance of the Avenue is appreciated and its interrelationship with the Stonehenge and Durrington monument, it now cannot now be maintained that the Eastern Tunnel Portal is sited in an area of the WHS which is somehow of lesser heritage significance (see Paul Garwood’s figure 1 for a clear representation of this). It now appears that the siting of the portal will ‘unwittingly cause substantive damage’ to how the landscape is understood. Further work clearly needs to take place to understand this (see below) but at this stage the evidence is sufficient to conclude that there will be significant harm

Highways England does not agree that the Scheme will cause substantial harm to the WHS.

The HIA – the conclusions of which are confirmed when applied to the ‘new discovery’ in the HIA Addendum [TR010025-001980, paragraph 8.1.8] - reports [APP-195, Table 11] the following effects on Asset Groups surrounding the eastern tunnel portal: Old and New King Barrows (Moderate Beneficial); The Avenue (Large Beneficial); The Avenue Barrows (Moderate Beneficial); Countess Farm Barrows - which are situated close to the eastern portal (Slight Adverse); Vespasian’s Camp Barrows (Neutral) and Durrington Walls, Woodhenge and Associated Sites (Slight Beneficial).

With regards to the position of the eastern portal, in the view of the UNESCO World Heritage Centre/ICOMOS Advisory Mission 2018, *“The eastern portal has been positioned in the least impactful location available close to the WHS boundary, given the constraints imposed by the attributes of the WHS, other significant sites in the vicinity, and local topographic and environmental conditions. The location of the eastern portal to the east of The Avenue and its siting within a micro valley is an improvement on previous options.”* [REP1-008].

The positions of the tunnel portals have been optimised at the head of dry valleys in the landscape and the road (and traffic on it), hidden within deep retained cuttings that minimise land-take, views, reduces noise and improves the tranquillity of the WHS. The further addition of 200m of canopy at the western portal and 85m of canopy at the eastern portal extend the tunnel from 3km to almost 3.3km and aid landscape integration. Chalk grassland over the eastern portal canopy, the existing A303 alignment (including



to the OUV and the heritage significance of the WHS (the Consortium has dealt with heritage harm from the Western Portal at length in its other submissions to the Examination).

removing the existing dual carriageway and replacing it with chalk grassland between Stonehenge Road and Vespasian's Camp), as well as chalk grassland over the western portal canopy, Green Bridge 4 and to the north and south of the western portal approach cutting, together soften views of the approach cuttings and portal entrances and aid its visual integration within the landscape. Furthermore, we refer to Table 13 in the Heritage Impact Assessment [APP-195], which shows the effects that the Scheme would have on the WHS in relation to its Attributes of OUV, Integrity and Authenticity. The table also shows how the Scheme would benefit the WHS in comparison with the effects of the existing A303. Overall, the Scheme is assessed to have a Slight Beneficial effect on the OUV of the WHS as a whole [APP-195, paragraph 12.4.5]. The OUV of the WHS would be sustained. The HIA Addendum show that this conclusion remains when the 'new discovery' is considered, taking the conclusions of the SHLP 2020 paper at face value, therefore no 'unwitting substantive damage' or significant harm to the OUV or WHS is caused. See [TR010025-001980, paragraph 8.1.8]

The Applicant has responded to this point further in its response to Gaffney et al. below at Point 2.28.

With regards to the point around the theory of treating Stonehenge, the Avenue and Durrington as one entity, the Applicant has responded to this above at Points 2.5 and 2.6 and F. The HIA [APP-195] already acknowledges theories that link Stonehenge with Durrington Walls, noting "Parker Pearson and Ramilisonina (1998) have speculated that there was a dualistic relationship in which Stonehenge was associated with the dead, whilst Durrington Walls was seen as the land of the living, with the Avon forming part of a processional route between the two." [APP-



		195, 296], and therefore the assessment of impacts is already made in this context.
2.15	Fifth, the new discovery which is made up of ‘pits’ undermines conclusions that HE has reached as to the presence of several possible pits that would be destroyed by the scheme (see paras 2 and 3 of Paul Garwood’s statement sent on 25 June 2020 (TR010025-001960) <sup>1</sup> ). Conclusions that these are natural features of no heritage significance inand of themselves are now unsafe.	The archaeological evaluation undertaken for the Scheme did identify and investigate the large pit-like features within the Scheme boundary that are cited by Paul Garwood. The Applicant considers that the interpretation of the features cited by Paul Garwood as of natural origin (but containing cultural material) is sound, based on the evidence from the evaluations [see REP1-045 & 046; REP1-042 & 043; REP1-049 & 050; REP1-051], which is analysed in detail in the Overarching Response submitted to the Secretary of State on the 13 <sup>th</sup> August 2020 [TR010025-001981, section 2]. As stated in our Overarching Response [TR010025-001981], the recent publication/discovery does not change this conclusion.
2.16	Sixth, and notwithstanding the above, at the very least, the new discovery highlights the need for further research into and assessment of the landscape as a whole. This discovery was made only a couple of months ago but it has existed in the ground for thousands of years. Even if the Secretary of State takes the view that he cannot be certain as to the importance of the relationship between features in the landscape and the impact of the road then he ought to take a precautionary approach and refuse the Scheme. There is (at the very least) a real risk of significant harm to one of the most important heritage assets within this nation. That clearly militates in favour of rejecting the proposal for additional work to be conducted in order properly to understand the landscape and its impacts. Further, if plans for a tunnel proceed following	<p>We would point the Secretary of State to the submissions of Wiltshire Council [TR010025-001968] and the National Trust [TR010025-001949] as to the evidence base for the ‘new discovery’ and the significance of the discovery as well as the submissions of eminent archaeologists to the Secretary of State on the 13<sup>th</sup> August – Prof Tim Darvill [TR010025-001964] and Mike Pitts prehistorian and author FSA [TR010025-001967] who disagree with the interpretation of the ‘new discoveries’.</p> <p>Regarding the assertion that further assessment of the landscape as a whole is needed, this argument is unfounded, as the Applicant’s HIA deals with the wider context at length, including spatial, topographic and chronological relationships; inter-relationships and contextual associations between individual assets, Asset Groups and areas; and the articulation of the wider prehistoric landscape. The HIA considers the wider impacts of the</p>



rejection of the DCO, it is clear that the location of the portals will need to be reconsidered in light of this new information. In particular the assessments which led HE to believe that this was a less important area of the world heritage sites are clearly out of date and undermined by this new discovery.

Scheme upon the Attributes that convey the OUV of the WHS, its Integrity and Authenticity in extensive detail [APP-195, sections 6 & 9–12].

Regarding the need for further research, the comprehensive DAMS [TR010025-001951] developed in consultation with members of the Heritage Monitoring and Advisory Group (HMAG), and with input from the Scientific Committee, seeks to capture current research questions and is reflexive and iterative in order to respond to developing theories, interpretations and technologies as the design of the archaeological mitigation works is progressed, and to address new discoveries during the mitigation programme. Heritage consultees have also confirmed in their submissions that the DAMS is fit-for-purpose and that the dDCO, Outline Environmental Management Plan (OEMP) and DAMS ensure that heritage advice can play an appropriate and important role in relation to the Scheme detailed design [see Historic England's closing statement to the Examination – [TR010025-001736, para. 1.7].

As explained in the Applicant's Overarching Response addressing the 'new discovery' [TR010025-001981], the Applicant has nevertheless provided EIA and HIA Addenda [TR010025-001979 and TR010025-001980] with regards to the 'new discovery', taking the conclusions of the paper at face value, to demonstrate that it has been robustly assessed in the context of the WHS. These conclude that no new Likely Significant Effects have been identified or changes to the overall conclusions regarding the impact of the Scheme on the discovery, stated interrelationships, contribution to expressing Attributes of OUV, Integrity, Authenticity

and the OUV of the WHS as a whole following the 2020 SHLP Paper.

The submissions of key statutory stakeholders are therefore to the effect that there is simply insufficient evidence for the conclusions advanced in the paper and therefore there is not even the uncertainty that Ms Hutton says ought to result in the Secretary of State taking a precautionary approach. In any event even with certainty on the conclusions of the paper, the Addenda show that the effects of the Scheme are unchanged by the 'discovery', no additional work or investigation is necessary and the case for the Scheme and the making of the DCO as applied for is undiminished.

The locations of the tunnel portals as they relate to the proposed 'new discovery' is considered at Point 2.14 above. The positions of the tunnel portals have been optimised at the head of dry valleys in the landscape and the road (and traffic on it), hidden within deep retained cuttings that minimise land-take, views, reduces noise and improves the tranquillity of the WHS.

The outline design process has included assessments of the impacts of different design options on the OUV of the WHS including the consideration of the tunnel portal locations at each stage of the development of the outline design [see APP-041, ES Chapter 3, Assessment of Alternatives].

2.17

The new discovery has a profound impact on: the significance of the WHS, an understanding of the significance of interrelationships between features in the landscape and an understanding of the impact of the road scheme. As this new discovery is fundamental to the decision to be made, the facts of the discovery, its significance and any expert evidence directed to these

As set out in the Applicant's Overarching Response addressing the 'new discovery' [TR010025-001981, Appendix A] the Applicant does not agree with these comments.

The Applicant notes that the significance of the WHS does not change following the publication of the 2020 SHLP Paper. The



matters ought to be examined by the independent inspectors. Further, for the significance of the pits to be properly appreciated they must be considered in the context of the WHS and the interrelationships of the features. As the papers by Gaffney, Garwood and Baldwin, Brian Edwards and Paul Garwood make clear, key to the relationships are the intervisibility of the various features and the positioning of the Avenue in particular. At minimum, an attended site visit will be necessary together with rigorous testing and consideration of the evidence by the independent inspectors in order to understand the significance of the interrelationships of the various assets. Without such a procedure, as is provided for within the examination stage under the Planning Act 2008, the process is highly likely to be procedurally unfair.

significance of the WHS remains as of Very High value as reported in the ES [APP-044] and the HIA [APP-195].

The Applicant has thoroughly considered the inter-relationships between features in the landscape and the impacts of the Scheme upon them in the Cultural Heritage Setting Assessment [APP218] and the HIA [APP-195]. The Applicant's HIA deals with the wider context at length, including spatial, topographic and chronological relationships; inter-relationships and contextual associations between individual assets, Asset Groups and areas; and the articulation of the wider prehistoric landscape. The HIA considers the wider impacts of the Scheme upon the Attributes that convey the OUV of the WHS, its Integrity and Authenticity in extensive detail [APP-195, sections 6 & 9–12].

In addition, the Applicant submitted the HIA Addendum [TR010025-001980] on 13 August 2020 which, amongst other things, considers the elements of the 'new discovery', and potential interrelationships with other heritage assets stated in the 2020 SHLP paper (using, among other things, the extensive information on intervisibility included in the 2020 SHLP Paper).

With regards to the Avenue, please see Point 2.14 above and Point 2.28 below.

As such, the Secretary of State has all the necessary and appropriate information before him on the new factual matters proposed in the 2020 SHLP paper and (if valid) their significance and the significance of the WHS and the interrelationships of the features within it, in order to make a robust and fully informed decision on the application –neither reopening of the examination nor a further site visit is required.

More generally, the Applicant notes that the Secretary of State's letter of 16 July 2020 set out a full process for allowing the



recipients to respond to the SHLP paper 2020 and to the submissions of the Blick Mead Project Team and Consortium of Archaeologists or the Stonehenge Alliance on 25 and 26 June 2020, as well as to allow the Blick Mead Project Team and Consortium of Archaeologists and/or the Stonehenge Alliance (and other interested parties) to submit further submissions by 13 August 2020, which these interested parties took advantage of (including the Stonehenge Alliance).

Further, by the Secretary of State's letter of 20 August, a subsequent process was set out by which interested parties have been given a further period within which to comment on submissions. In addition, the Applicant has undertaken notification and consultation procedures mirroring Regulation 20 of the 2017 EIA Regulations in respect of its work submitted to the Secretary of State on 13 August 2020.

As such, all interested parties have had a full opportunity to be consulted and submit representations/evidence (including visual representations, photographs) as they consider appropriate on the issues at hand. The Secretary of State, as the ultimate decision-maker, will then need to take these submissions into account when determining the application. There is therefore no basis for any assertions of procedural unfairness.

2.18	<p>Finally, we ask the Secretary of State to take into account his 'minded to decision' on the application for a proposed a 303 Sparkford to Ilchester Dualling Order. On 21 July 2020 the Secretary of State announced that he was minded to refuse the order. If such a refusal follows this will have clear implications for the benefits of the portion of dualling at Stonehenge which is the subject of this application. Any claim that this application would lead to</p>	<p>As the Applicant stated throughout the Examination, and as articulated in particular in its Closing Submission [AS-146] (emphasis added): "The Scheme is being developed as part of a long-term commitment to improvement to the A303 / A358 corridor. Two other schemes are currently being developed, being the A358 Taunton to Southfields Dualling and the A303 Sparkford to Ilchester Dualling. <b>Each scheme has an independent funding scheme and they are not dependent on each other.</b>"</p>
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fast flowing traffic along a large stretch of the A303 would be clearly undermined if just one of HE's projects does not go ahead.

We note that the new deadline for a decision on the Sparkford to Ilchester Order is 20 November 2020. We therefore consider that the Secretary of State must take into account any refusal on that Order when making a decision on the Stonehenge Tunnel.

It is not for the Applicant to comment on the status of the A303 Sparkford to Ilchester Dualling application in the context of this Scheme, except to say any decision on that application has no bearing on the need for, and benefits, of this Scheme – they are distinct schemes.

## Representation from Paul Garwood

2.19

### 1. Heritage Impact Assessment

#### ***1.1 The significance of large-scale prehistoric ceremonial landscape organization for the Outstanding Universal Value of the World Heritage Site and Heritage Impact Assessment***

The flaws of the HIA undertaken as part of the evaluation phase of the A303 scheme (Highways England 2018) are highlighted by the Durrington pit discoveries (Gaffney *et al.* 2020a; Garwood 2020). A fundamental problem is the inadequate attention paid in the HIA document to the OUV attributes of the Stonehenge WHS area, which are not considered fully or precisely in terms of *landscape-scale* interpretation or curation. Although the HIA explicitly recognizes the significance of the OUV attributes as the foundations for the HIA (Highways England 2018, 3-6), making frequent mention of their pivotal importance as

With regards to aspects of setting, intervisibility and interrelationships of assets and Asset Groups within the landscape, the Applicant has considered these aspects in painstaking detail in the HIA [APP-195]. The Applicant has frequently responded to these aspects throughout examination [see the Applicant's responses at REP2-025, CH.1.41; REP3-013, paras. 56.1.2, 56.1.6 and 56.1.28; REP4-036, paras. 13.1.11, 13.1.16 and 13.1.18; at ISH2 REP4-030, items 5(i) regarding the adequacies of content, analyses, assessments and conclusions of the Heritage Impact Assessment (HIA) and item 6 regarding the effect of elements of the proposed development on cultural heritage assets and their settings; REP5-003, paras. 34.1.6, 314.1.35 and 34.1.36; REP6-030, response to Written Question LV 2.1 (iii); REP7-021, paras. 6.4.30, 31.1.2, 31.1.3, 31.1.8 and 31.1.9; at ISH8 [REP8-016, item 3.3(i); REP8-013, paras. 2.1.31 and 10.1.2 and REP9-022, paras. 18.1.3 and 18.1.6].



<p>criteria for judging the impact of the A303 scheme on the WHS (e.g. Highways England 2018, 9-10), this recognition is not carried through to a well-devised assessment process. The HIA focuses mostly on the definition and assessment of 'assets' (mainly surviving above-ground monuments) (Highways England 2018, 10-20) rather than recognizing that it is the <i>totality and inter-relatedness</i> of all the monuments, sub-surface features of all kinds, ploughzone sites, and so forth, that together constitute the Stonehenge landscape and underpin the OUV attributes.</p> <p>There are two major weaknesses in the way the HIA is formulated:</p> <ul style="list-style-type: none"> <li>(i). The HIA privileges and gives undue weighting to 'sites and monuments' as significant points or locales, and gives less consideration to the interrelatedness of sites and monuments at extensive spatial scales (including visual perception, viewsheds, etc), even though it is the coherently structured character of the Stonehenge ceremonial landscape that forms the basis for much of the OUV of the WHS, including its Integrity and Authenticity.</li> <li>(ii). The HIA does not take sufficient account of how the OUV attributes are contextualized and elaborated upon in the WHS Management Plan (Simmonds &amp; Thomas 2015, section 2.3). For example, the description of Attribute 6 (<i>The</i></li> </ul>	<p>In terms of the methodological approach to the Heritage Impact Assessment [APP-195] undertaken by the Applicant, in balancing the harm and benefits to Attributes of OUV as a result of the Scheme, in order to arrive at an overall effect on the WHS as a whole, the Heritage Impact Assessment has been prepared following ICOMOS guidelines: (<a href="https://www.icomos.org/world_heritage/HIA_20110201.pdf">https://www.icomos.org/world_heritage/HIA_20110201.pdf</a>). The scope and approach of this assessment, which is reported in ES Appendix 6.1 [APP-195], was endorsed as appropriate by UNESCO/ICOMOS in their report from their third advisory mission on the scheme early in 2018 (<a href="https://whc.unesco.org/en/list/373/documents/">https://whc.unesco.org/en/list/373/documents/</a>). The HIA Scoping Report was also approved by HMAG (which includes Historic England, Wiltshire Council, the National Trust and English Heritage) The Applicant considers that the HIA has been carried out accurately and with a full appreciation and understanding of the importance of the whole WHS and its OUV. It considers the approach to balancing the impacts of the Scheme on attributes of OUV in order to reach an overall conclusion in terms of the impact on the OUV of the WHS is appropriate, and necessary in order to inform the tests required to be undertaken by the Secretary of State.</p> <p>The Applicant has provided a full response to this approach to undertaking the HIA in its detailed response to the Examination [REP7-021, para. 31.1.2] which provides a further explanation as to how the attributes of OUV, Integrity and Authenticity have been considered in relation to the whole WHS in support of the Applicant's position that this approach is correct and supported by the relevant guidance.</p> <p>The Secretary of State should also note the Applicant's response at Point 2.6 (1) and (2) above regarding its consideration within</p>
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	<p><i>disposition, physical remains and settings of the key Neolithic and Bronze Age funerary, ceremonial and other monuments and sites of the period, which together form a landscape without parallel; Highways England 2018, 6), is best understood in conjunction with the more detailed characterization in the WHS Management Plan:</i></p> <p><i>“The design, position and interrelationship of the monuments are evidence of a highly organised prehistoric society able to impose its concepts on the environment. In some parts of the WHS, monuments or groups of monuments, such as the King Barrow Ridge barrow cemetery, Stonehenge and the Normanton Down barrow cemetery, are so well-preserved and prominent that they and their physical and topographical interrelationships form immediately recognisable parts of an archaeological landscape. .... In other parts of the WHS, however, the monuments and sites have become degraded or masked and their significance and physical relationships to one another and the landscape are no longer visible to the naked eye, but are nevertheless equally attributes of the Site’s OUV. There are also areas which appear to have been deliberately left empty of monuments. These are important for our constantly developing</i></p>	<p>the HIA of the strong visual relationships between monuments, including Stonehenge (AG22) and the inner ring of barrow cemeteries on the near horizon and noting various theories regarding the physical and spiritual meanings of bounded spaces [APP-195, para. 6.9.19-27]. The HIA also assesses the attributes of setting, intra-group relationships and wider landscape context of asset groups and isolated and discrete assets [APP-195, pages 177 APP-041485] as well as considering the deliberate placement of barrows in relation to earlier monuments.</p> <p>As stated in the HIA [APP-195, para. 5.3.20] ‘<i>The setting assessment considers factors set out in Good Practice Advice in Planning 3, The Setting of Heritage Assets (Historic England 2017), Guidelines for Landscape and Visual Impact Assessment (GLVIA3) (Landscape Institute / Institute of Environmental Management and Assessment 2013) and DMRB Volume 11 Section 3 Part 5, Landscape Effects. Factors that may contribute to the setting of a heritage asset include, but are not limited to:</i></p> <ul style="list-style-type: none"> <li><i>a) Functional and physical relationships with other structures / heritage assets and how these have changed over time;</i></li> <li><i>b) Inter-visibility;</i></li> <li><i>c) Topographic features that influenced its location;</i></li> <li><i>d) Natural environment and aesthetic values;</i></li> <li><i>e) Physical character of the surrounding landscape..., including any formal design or land use;</i></li> <li><i>f) The original layout of the heritage asset and how this has changed;</i></li> <li><i>g) Potential buried or archaeological elements surrounding the heritage asset;</i></li> </ul>
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	<p><i>understanding of the landscape as whole” (ibid., section 2.3.21).</i></p> <p>Such structuring of the prehistoric landscape is most immediately visible to us in terms of monumental architecture (such as enclosures, avenues, lines of funerary monuments, etc), but is also evident in the wider spatial patterning of activities in all archaeological settings. We also know that such large-scale total-landscape organizations of monuments and practices changed on several occasions over time and cannot be reduced to a single ‘model’ of the prehistoric landscape (e.g. see Darvill 2005). These fundamental conditions of the evidence are not recognized by Highways England as the basis for developing their HIA methodology: by focusing on particular sites, the fundamental importance of the <i>extensive</i> spatiality and the <i>interrelatedness</i> of prehistoric landscape organizations, monuments, social practices, sensory perceptions and meanings, is marginalized or ignored altogether.</p> <p>The unsuitability of the Highways England approach has been brought into stark focus again, however, by the discovery of the Durrington massive pits structure (Gaffney <i>et al.</i> 2020a; cf. Garwood 2020). This not only highlights the coherently organized and integrated character of the prehistoric ceremonial landscape, but also demonstrates that large-scale physical and cognitive ordering of tracts of the Stonehenge landscape effectively created vast monumental structures that had an existence that far</p>	<p><i>h) Views to, from and including the heritage asset or place;</i></p> <p><i>i) Formal or planned vistas;</i></p> <p><i>j) The prominence of the heritage asset in views throughout the surrounding area;</i></p> <p><i>k) Views associated with the aesthetic, functional or ceremonial purpose of the asset; for example, defensive sites, beacons or designed landscapes;</i></p> <p><i>l) Historical, artistic, literary, place name, cultural or scenic associations might all contribute to the significance of a heritage asset;</i></p> <p><i>m) Cultural traditions, rituals, spiritual practices and concepts related to heritage assets;</i></p> <p><i>n) Other sensory elements, e.g. sounds or smell associated with the heritage asset; and</i></p> <p><i>o) Remoteness, ‘wildness’.</i></p> <p>Landscape is clearly central to this list of factors.</p> <p>The setting assessment also considers intervisibility [APP-195, paras. 5.3.25–5.3.29] within a bare-earth model context [APP-195, paras. 5.3.30–5.3.31] as well as current noise and vibration [APP-195, paras. 5.3.32–5.3.35], Astronomical and Solstitial sightlines [APP-195, paras. 5.3.36–5.3.37] and key views [APP-195, para. 5.3.38–5.3.40]. This shows the breadth of the Applicant’s assessment of setting in relation to discrete and isolated assets and Asset Groups which convey the Attributes of the OUV of the WHS. The ‘extensive spatiality and the interrelatedness’, ‘social practices’, ‘sensory perceptions’ and ‘meanings’ of assets and asset groups that convey the Attributes of OUV has therefore been considered within the HIA.</p>
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<p>transcended any one monument component. This can be illustrated using just two (of many) periods of large-scale landscape organization (see Figure 1): the Durrington pits structure of the early to mid-3<sup>rd</sup> millennium BC, and the Early Bronze Age funerary landscape – focused on Stonehenge itself - that developed during the early 2<sup>nd</sup> millennium BC. In addition to basic mapping of these landscape-scale structures, it is essential that the wider organization of social practices that were defined by these structures, both within them and around them, is appreciated, and that even more extensive visual parameters and connections existed in the past (discussed in Gaffney <i>et al.</i> 2020b).</p> <p>As can be seen in Figure 1 [see Fig 1 in submission], the A303 DCO traverses these prehistoric ceremonial landscapes structures, cutting through them directly in a highly destructive manner, and impacting on them more widely by contaminating their visual properties and relationships (see Gaffney <i>et al.</i> 2020).</p>	<p>The Heritage Impact Assessment (HIA) [APP-195, section 11] assesses the overall impact and significance of the effect of the Scheme on the OUV of the WHS, including physical, visual, noise, setting and other impacts. The Applicant notes that the Attributes of OUV stress the importance of the siting of the sites and monuments in relation to the landscape, in relation to the skies and astronomy, in relationship to each other, and their siting, physical remains and setting that together form a landscape without parallel. The HIA considers and assesses the impact of the Scheme on Attributes of the OUV of the WHS, including the setting and relationships between the monuments within the visual envelope of the WHS. Landscape is therefore again central.</p> <p>With regards to the assertion that ‘The HIA does not take sufficient account of how the OUV attributes are contextualised and elaborated upon in the WHS Management Plan’, this statement is incorrect. The Secretary of State is directed to the HIA [APP-195] where it clearly sets out at paragraph 6.6.20 how the 2015 WHS Management Plan 2015 expands upon the 2013 SoOUV Statement on Authenticity, relating Authenticity to each of the seven Attributes of OUV identified in the Management Plan.</p> <p>With regards to the ‘new discovery’ (anomalies) the Applicant points the Secretary of State to submissions by Wiltshire Council [TR010025-001968] and the National Trust [TR010025-001975] that question the evidence base for the finds and their interpretation as well as submissions by eminent archaeologists such as Professor Tim Darvill [TR010025-001964] and prehistorian and author Mike Pitts FSA [TR010025-001967] that question the evidence and interpretation. Even if the interpretation of the ‘new discoveries’ is correct, the ES and HIA Addenda [TR010025-001979 and TR010025-001980], which treat the discoveries at face value, conclude no new Likely Significant</p>
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Effects and No change to the overall impact of the Scheme on the OUV of the WHS, following the publication of the 2020 SHLP Paper.

The Applicant disagrees with Paul Garwood's views regarding the design. The Scheme has been designed carefully and sensitively to avoid archaeological remains wherever possible and to hide the Scheme within the landscape, including in key views from sensitive heritage assets and receptors. The Scheme includes a c.3km long bored tunnel which removes the existing surface road from the settings of and from conflicting with the inter-relationships between key monuments that convey the Attributes of the OUV of the WHS including the Normanton Down Barrows, Stonehenge, Stonehenge Barrows, the Greater Cursus, the Cursus Barrows, Stonehenge Bottom/ Luxenborough Barrows, The Old and New King Barrows, the Coneybury Henge and Associated Monuments, The Avenue and the Avenue Barrows. The bored tunnel also enables the removal of the surface road from interfering with key astronomical and solstitial alignments between the Avenue and the Sun Barrow and Stonehenge and the Sun Barrow. The bored tunnel also enables the reconnection of the Avenue where it is currently severed by the current surface road.

The Scheme will improve the visitor experience by transforming the WHS landscape, reconnecting the two halves of the WHS, which are currently severed by the surface road. Connectivity into and through the WHS will be improved through the placement of the road in bored tunnel and the provision of new and enhanced public rights of way across the landscape.

Cultural Heritage Design Commitments are set out in the Outline Environmental Management Plan [TR010025-001949, Table 3.2b]. These include specific design parameters related to road geometry and scale, land-take, lighting, signage, boundary fencing



		<p>and gates to ensure that the Scheme is visually recessive and sympathetically integrated within the WHS.</p>
<p>2.20</p>	<p><b>1.2 The implications of new discoveries and landscape-scale frameworks of knowledge and understanding for the Heritage Impact Assessment document</b></p> <p>In the light of the comments in section 1.1, and given that such large-scale structuring of the Stonehenge landscape has been recognised by archaeologists for many decades, it is incredible that the HIA treats the landscape largely as a mass of disconnected ‘assets’ and ‘asset groups’ (essentially individual monuments or clusters of monuments) that are assessed in isolation and their value negotiated with respect to potential A303 impacts only locally (Highways England 2018, 10-20, 167-485) rather than in relation to larger-scale frames of reference.</p> <p>This methodological error is compounded to an extreme degree by the extrapolation of calculations of value and impact based on ‘asset’ and ‘asset-group’ assessments to the landscape-scale OUV attributes (Highways England 2018, table 3), despite there being little evaluation of how these were co-related and inter-referenced in the past. The ‘assessments’ of the effects of the road scheme on the OUV of the WHS and matters of ‘Integrity’ and ‘Authenticity’ presented in the HIA (Highways England 2018, 23-8) are thus unreliable, and of course take no account of the recent Durrington discoveries. For example:</p>	<p>Regarding the argument that <i>‘the HIA treats the landscape largely as a mass of disconnected ‘assets’ and ‘asset groups’ rather than in relation to larger-scale frames of reference’</i>, the Applicant has responded to this previously in examination [see for example response to ICOMOS UK [REP7-021, para. 31.1.2]. As has been re-iterated above at Point 2.19, the HIA deals thoroughly with inter-relationships between assets and Asset Groups and looks at the wider impacts of the Scheme upon the Attributes of OUV, not just locally as claimed by Paul Garwood. The Applicant has articulated in its HIA [APP-195], throughout section 6.9, and with particular reference to the Attributes of OUV, where theories of the past by academics regarding how assets and asset groups ‘co-related’ and ‘inter-referenced’, the Applicant would point out that these are not fact, but are ‘theories’ open to interpretation and re-interpretation continuously within academic circles.</p> <p>It should be noted that in doing so the Applicant has followed the appropriate guidance in undertaking its HIA (ICOMOS 2011) and the HIA Scoping document was endorsed as appropriate by the UNESCO World Heritage Centre/ICOMOS Advisory Mission 2018 and approved by HMAG (that includes Historic England, Wiltshire Council, the National Trust and English Heritage). Historic England also noted that the HIA was thorough and broadly concurred with the assessment in the HIA in its application of the ICOMOS 2011 guidelines [TR010025-001972] and the overall assessment conclusions. In particular, Historic England stated in that submission (para 2.4.10):</p>



<p><b>OUV attribute 5:</b> <i>The siting of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to each other.</i> Rather than a ‘slight beneficial effect’, the scheme will in reality have a ‘large adverse effect’. The serious damage caused to the cosmographically-structured Early Bronze Age funerary landscape by the western tunnel portal and road cutting was highlighted during the Examination Authority’ cultural heritage hearings (Garwood 2019a, 2019b). The full impact of the road scheme on the Durrington monumental pits structure and the landscape zone this demarcates (cf. Garwood 2020) is also severe, and presently not understood in full, but there is no question that this has exceptional importance for the wider relationships among Neolithic ceremonial and occupation sites and related areas of prehistoric activity across the entire eastern part of the WHS.</p> <p><b>OUV attribute 6:</b> <i>The disposition, physical remains and settings of the key Neolithic and Bronze Age funerary, ceremonial and other monuments and sites of the period, which together form a landscape without parallel.</i> Similar points to those made in relation to OUV attribute 5 can be made in relation to OUV attribute 6. The Highways England assessment that the road scheme will have a ‘slight beneficial effect’ is unwarranted; in reality it will have a ‘large adverse effect’ by permanently blighting the western part of the WHS in the vicinity of Winterbourne</p>	<p>"We consider that the assessments conducted under the Scheme were sufficiently rigorous to inform determination of the Scheme and development of an appropriate and proportionate archaeological mitigation strategy. The recently published research does not change our view of those assessments."</p> <p>Regarding the point that the HIA trades off beneficial and adverse effects on OUV Attributes and ignores the Integrity of the WHS as a whole, this is mistaken, as was demonstrated throughout the examination [see for example response to ICOMOS UK [REP5-003, para 11.2.31 and REP7-021, para. 31.1.3 and item 3(vi) of the written summary of the Applicants’ oral submission put at Cultural Heritage hearings 2-2 on 5th and 6th June 2019 - June 2019 [REP4-030]].</p> <p>As set out in the Applicant’s various submissions to examination, careful and thoroughly evidenced consideration has been given to the balance of beneficial and adverse impacts and the ultimate conclusion on overall effects in the HIA [APP-195] section 11, Evaluation of overall impact and significance of effect of Scheme on the OUV of the WHS. This considers impacts and effects in relation to Scheme locations, Attributes of OUV, integrity and authenticity, and assesses the overall significance of effect of the Scheme. HIA section 12, Summary and conclusions, considers the Scheme’s alignment with WHS Management Plan vision, aims and policies [APP-195, section 12.3] and effects on the OUV of the WHS [APP-195, section 12.4].</p> <p>With regard to the effect of the Scheme on the WHS as a whole, we would also refer Secretary of State to the Applicant’s response to the Examining Authority’s Written Question CH.1.4 [REP2-025, pp.5-10–11].With regards to impacts on the Authenticity of the WHS the Applicant has responded to this at the first ISH for Cultural Heritage [REP4-030, items 4 (i), (ii) and (iii)] and in its</p>
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<p>Stoke Crossroads, and by impacting on the newly discovered Durrington pits monumentalized landscape.</p> <p>The huge cutting for the western tunnel portal approach road: (i) fragments the remarkable Early Neolithic long barrow concentration in this area (the densest such monument cluster in Europe; cf. Roberts <i>et al.</i> 2018); (ii) slices through the Chalcolithic/Early Bronze Age settlement area that extends south-north on the high ground to the west of Stonehenge (possibly the largest ‘Beaker’ settlement in Europe; cf. Pollard <i>et al.</i> 2017); (iii) compromises the setting of the Early Bronze Age linear barrow group (the best-preserved funerary monument complex of this period in north-west Europe, integral to the Early Bronze Age structuring of the landscape; Garwood 2019a, 2019b), and (iv) breaks up the highly-organized later Bronze Age and Iron Age zone of field systems and settlement that lies across the western part of the WHS (Pollard <i>et al.</i> 2017). The adverse effects of the road scheme in this area are exceptionally severe.</p> <p>To the east, we have only just recognized the existence of the very large-scale organization of the ceremonial and inhabited landscape marked by the Durrington pits (Gaffney <i>et al.</i> 2020a), but there is no question that this unparalleled new structure conditioned the disposition and settings of Neolithic (and later prehistoric) activity at an unknown but vast scale (Garwood 2020). The extent to which the zones within and outside the circumference of</p>	<p>response to further information submitted at deadline 4 [REP5-003, items. 18.2.17, 34.1.6, 34.1.7 and 34.1.12] and deadlines 5 and 6 [REP7-021, para. 31.1.9] and at ISH2 for Cultural Heritage, Landscape and Visual Effects and Design [REP8-016, Question 3.1 (i)].</p> <p>The Scheme is assessed in the HIA [APP-195] to have a Slight Beneficial effect on the Outstanding Universal Value 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. Overall the OUV of the WHS would be sustained.</p> <p>With regard to the examples regarding the effect of the Scheme on Attributes 5 and 6, the Applicant disagrees with Prof Garwood’s assertions on classification of effect. The Applicant’s reasons for this are as set out in (i) its submissions to the Examination in response to the points when Paul Garwood first made them (including by reference to the extensive and thorough evidence-based analysis of them in the Cultural Heritage Setting Assessment [APP-218] and the HIA [APP-195; section 6.9, pages 198 – 208] and in its responses to Written Questions [REP6-030, LV 2.1 (iii), (iv) and (vii)], (ii) the Addenda to the ES and HIA [TR010025-001979 and TR010025-001980], taking the ‘new discovery’ at face value. It is also important to note that many key stakeholders regard that ‘new discovery’ as unevidenced [TR010025-001964, TR010025-001967, TR010025-001968 and TR010025-001975]]. The HIA is therefore not ‘unreliable’ and the</p>
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<p>pits were differentiated in terms of practices and meanings is also unknown, but it is likely that the pits dictated movements of people and the wider organisation of social life in a zone that extended for hundreds of metres beyond the pit circuit. This zone is directly impacted upon by the road scheme DCO.</p> <p><b>Integrity:</b> In the light of the points made with respect to OUV attributes 3-6 above, the claim made by Highways England that the road scheme will have a 'slight beneficial effect' on the Integrity of the WHS and its OUV (2018, 28-30) is unfounded. Whatever the supposed advantages of the scheme for improving the 'integrity' of parts of the WHS, these are far outweighed by the disadvantages. In any case, the calculation adopted by Highways England, that 'trades off' beneficial and adverse effects on OUV attributes, ignores the integrity of the WHS as a whole – the OUV attributes <i>together</i> define the WHS and supposed enhancement of some does not justify damage to the others.</p> <p>The Durrington monumental pits and the extensively-organised landscape zones these define, add significantly to the OUV of the WHS. These demonstrate the existence of a new – previously recognised - scale of interrelatedness, coherence and integration in the structuring of Neolithic and Bronze Age ceremonial landscapes. These spanned the entire WHS from east to west, and probably far beyond (see Figure x), and</p>	<p>statement that asserts that the Applicant takes 'no account of the recent Durrington discoveries' is also incorrect.</p> <p>With regards to Paul Garwood's statement that 'the extent to which the zones within and outside the circumference of pits were differentiated in terms of practices and meanings is also unknown, but it is likely that the pits dictated movements of people and the wider organisation of social life in a zone that extended for hundreds of metres beyond the pit circuit. This zone is directly impacted upon by the road scheme DCO.' The Applicant would note that this is all 'theoretical speculation' and has no grounding in hard evidence. The Applicant has considered the 'new discovery', its setting and inter-relationships in the HIA Addendum [TR010025-001980].</p> <p>With respect to the impacts of the retained cutting that forms the western approaches and Longbarrow Junction, the Applicant has responded in full to these arguments previously: See response to LV 2.1 in Highways England's response to the Examiners' Second Written Questions [REP6-030] (parts (iii), (iv) and (vii)). In summary, these matters were considered in detail in the Heritage Impact Assessment (HIA) [APP-195] and are also addressed in Highways England's comments on any further information submitted at deadline 4 [regarding long barrow concentration: REP5-003, items 34.1.6, 34.1.12; 34.1.16(g); 34.1.24; 34.1.29; on the sacred and funerary landscape: REP5-003, items 34.1.12; 34.1.6; 34.1.12; 34.1.16(e); 34.1.24; 34.1.35-34.1.38].</p> <p>With regards to the 'new discovery', the Applicant has assessed the impacts of the Scheme upon this (including on the Integrity and Authenticity of the WHS) in its ES and HIA Addenda [TR010025-001979, TR010025-001980]. No new Likely Significant Effects were reported and the overall</p>
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<p>encompassed even more extensive visual relationships and kinds of sensory integration (Gaffney <i>et al.</i> 2020b). The extremely damaging ('large adverse') effect of the scheme on the Integrity of the WHS, in the way it cuts completely through the structured prehistoric landscape, and physically changes or destroys parts of it, are unmistakable.</p> <p><b>Authenticity:</b> Highways England's claim that the road scheme will have a 'slight beneficial effect' on the Authenticity of the WHS and its OUV (2018, 30-1) is similarly unfounded. Key features of authenticity noted by Highways England such as 'form and design', interrelationships between 'assets', 'location and setting', and the relationships between 'assets' and landscape, would all be compromised by the road scheme. It is extraordinary that the damage to the highly structured Early Bronze Age funerary landscape that would be caused by the western portal road cutting, and the vast physically- and visually-intrusive Winterbourne Stoke Junction (Garwood 2019a), has not been properly assessed. There is no justification for compromising the authenticity of the Early Bronze Age ceremonial landscape, the coherence and preservation of which is unparalleled in Europe. Similarly, the landscape setting and the formal and design properties of the Durrington pits structure (Gaffney <i>et al.</i> 2020a, 2020b), the full character and wider relationships of which in the landscape around are yet to be investigated, present a new dimension to evaluation of the Authenticity of the WHS (for example, the Durrington pit circle viewed to the southeast includes much of the eastern portal</p>	<p>conclusions of the HIA remain unchanged. As mentioned above, with regard to the assertions by Paul Garwood about the unquestionable nature of the conclusions of the paper on the 'new discovery', it is also important to note many key stakeholders regard that 'new discovery' as unevidenced [TR010025-001964, TR010025-001967, TR010025-001968 and TR010025-001975].</p>
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	<p>approach including the proposed raised causeway and bridge across the Avon valley; Gaffney <i>et al.</i> 2020b, fig.5).</p>	
<p>2.21</p>	<p><b>1.3 Evaluation of the Heritage Impact Assessment undertaken by Highways England</b></p> <p>The OUV attributes of the WHS are based largely on an understanding of the Stonehenge as a contiguous, structured, whole thing. To destroy parts of this entity, on the basis of some ‘heritage value’ accountancy rationale (i.e. damage cost valuation in comparison with supposed ‘benefits’) can only weaken the OUV of the WHS, and seriously compromise the past cultural landscapes we aim to preserve, understand, and present to the public. Despite the claims made in the HIA, the discussion in section 1.2. demonstrates that the proposed A303 road scheme represents a significant threat to the OUV attributes, Integrity and Authenticity of the WHS. The HIA, therefore, is a seriously deficient document that provides no sound basis for evaluating the effects of the proposed scheme on the WHS or its OUV attributes. It should be discarded, and a more credible assessment framework developed instead based on a sound understanding of the unique prehistoric cultural heritage of the Stonehenge landscape.</p>	<p>As set out above, the Applicant does not agree that the HIA is 'deficient', nor does it agree that the Scheme represents a significant threat to the Attributes, Integrity and Authenticity of the OUV of the WHS. The HIA sets out in thorough and carefully evidenced detail, taking a precautionary approach, the effects of the Scheme on those matters and concludes an overall Slight Beneficial effect on the OUV of the WHS as a whole. <u>Overall the OUV of the WHS would be sustained [APP-195].</u></p> <p>Regarding the methodological approach undertaken in the HIA in relation to damage in one part of the WHS being offset by benefits in another part of the WHS, please see Point 2.20 above.</p> <p>The Applicant reiterates again that it has followed the appropriate guidance in undertaking its HIA (ICOMOS 2011) and the HIA Scoping Report was endorsed as appropriate by the ICOMOS Mission 2018. The HIA Scoping Report was approved by HMAG (including Historic England, Wiltshire Council, the National Trust and English Heritage). Historic England also noted that the HIA was thorough and broadly concurred with the assessment in the HIA in its application of the ICOMOS 2011 guidelines [TR010025-001972] and the overall assessment conclusions. In particular, Historic England stated in that submission (para 2.4.10):</p> <p>"We consider that the assessments conducted under the Scheme were sufficiently rigorous to inform determination of the Scheme and development of an appropriate and proportionate archaeological mitigation strategy. The recently published research does not change our view of those assessments."</p>



2.22	<p><b>2. Detailed Archaeological Mitigation Strategy</b></p> <p>The Detailed Archaeological Mitigation Strategy (DAMS) devised by Highways England addresses its own assessment of the cultural heritage Impact of the A303 scheme. As the HIA in this case is not – by any measure - fit for purpose (as outlined in section 2), it follows that the DAMS is compromised at a fundamental level.</p> <p>The flawed character of the DAMS at strategic and methodological levels has been commented on previously in some detail (e.g. Council for British Archaeology 2019, Garwood 2019c, Parker Pearson 2019), and also in the light of the new Durrington pit discoveries (Garwood 2020). In every respect, the DAMS falls far short of what we should expect in a WHS context (where prevailing research- quality standards of field method should apply). In the light of new the new discoveries, a few further points to clarify and extend previous observations can be made:</p>	<p>As set out above, the HIA [APP-195] is an extensive, thorough and carefully evidenced piece of work, which is entirely fit-for-purpose. Similarly, as set out in the Applicant’s Overarching Response addressing the ‘new discovery’ [TR010025-001981] previously submitted, the Applicant stands by the strategic and methodological approaches as set out in the DAMS, and this is unaffected by the ‘new discoveries’. It is far from a flawed document, rather it provides a comprehensive and detailed strategy, approved by key statutory stakeholders, for the mitigation of impacts on archaeological remains. The DAMS [TR010025-001951] provides for site specific research questions to be developed with input from specialists and for iterative development of strategies and field methods on site that respond to the nature and significance of the features encountered, all subject to consultation with and ultimately the approval of key statutory stakeholders. These provisions provide ample scope to address discoveries during the mitigation programme, and to take account of new research within the WHS. The provisions in the DAMS allow scope to accommodate a range of approaches, including the latest scientific methods, and the flexibility to take account of emerging discoveries.</p>
2.23	<p><b>2.1 Geophysical survey</b></p> <p>Geophysical mapping of sub-surface features and deposits along the road corridor is inadequate: this relies almost exclusively on magnetometry, which records just one kind of variation (soil magnetism), 2-dimensionally and</p>	<p>1.1 Geophysical Survey</p> <p>With regards to the quality of the geophysical surveys undertaken by the Applicant, this has been covered extensively in the Applicant’s Overarching Response addressing the ‘new discovery’ [TR010025-001981, section 2.4].</p>



superficially (i.e. mostly 0-0.5 m depth range). Although the quality of the magnetic evidence is good, including the data provided by *Stonehenge Hidden Landscape Project* (in raw pre-analysis map form), little or no use was made of other methods, which not only provide completely different kinds of evidence but also 3-dimensional data relating to the depth and volume of sub-surface features and deposits several metres deep (e.g. Ground Penetrating Radar and Electro-Magnetic Induction). Consequently, Highways England and their archaeological contractors have no comprehensive, seamless, 3D mapping of sub-surface evidence or any means of assessing geophysical data based on multi-sensor survey techniques.

This is weak practice considering recent advances in geophysical survey technologies and indeed the major lessons and results of the *Stonehenge Hidden Landscapes Project* (e.g. Gaffney *et al.* 2012, 2018). Recent ground-breaking discoveries within the WHS, which have totally transformed our knowledge and understanding of the Stonehenge landscape, including the unsuspected huge timber palisade enclosure sealed by the Durrington superhenge earthwork (Gaffney *et al.* 2018), and the Durrington massive pits structure (Gaffney *et al.* 2020), have been due entirely to the application of cutting-edge geophysical investigative techniques and their expert interpretation, yet the DAMS relies on single-sensor survey. This provides insufficient baseline information for archaeological decision-making and risks methodological

It is not correct of Paul Garwood to state that ‘little or no use was made of other methods’ of geophysical survey other than magnetometry. Four established geophysical survey techniques were employed [TR010025-001981, paras. 2.3.4–2.3.8] – detailed magnetometer (gradiometer) survey across the full extent of the Scheme boundary, while targeted use of electrical resistance survey, multi-channel ground penetrating radar (GPR) and electrical resistance tomography (ERT) served to further elucidate the results. This is further detailed in the Applicant’s Overarching Response [TR010025-001981, paras. 2.3.4–2.3.8]. The DAMS therefore, contrary to Garwood, does not rely on single-sensor survey, but on the four survey techniques employed above, supplemented by borehole and auger survey, test-pitting and sieving for artefacts in the topsoil and trial trenching.

The Applicant therefore has employed the techniques (which follow Historic England guidance) and has comprehensively mapped the sub-surface evidence using the multi-sensor survey data it has collected as demonstrated in its geophysical survey reports [which are published on the Scientific Committee website (in the case of earlier surveys <http://a303scientificcommittee.org.uk/archaeological-reports>) or as submitted at Deadline 1 [REP1-041; REP1-051; REP1-054; REP1-055]. The Applicant therefore also can identify features or deposits that have low levels of magnetic variation in relation to bedrock and other deposits, and recognise features and deposits that are more than c. 0.5 m below the current ground surface, using the GPR data it has collected.

It should be noted that the evaluation strategy employed on the Scheme, combining geophysics and trial trenching, is



<p>errors by failing to appreciate the number, density, morphologies, scales or complexity of the sub-surface features that more effective application of multiple techniques would reveal.</p> <p>The limited and uneven character of Highways England’s archaeological evaluation processes indicated in previous submissions (e.g. Garwood 2019c, 2020) thus stem at least in part from the nature of the geophysical surveys they have relied on. More specifically, their methods cannot identify features or deposits that have low levels of magnetic variation in relation to bedrock or other deposits (highlighted by recent analysis of electro-magnetic datasets in the course of the Birmingham/Ghent <i>Stonehenge Landscapes EMI Project</i>), nor can they recognize any features or deposits that are more than c.0.5 m deep from the current land surface (e.g. those buried by later colluvium or alluvium, especially along the eastern portal approach road).</p> <p><b>2.2 Trial trenching evaluation</b></p> <p>The reliance on trial trenching by Highways England contractors to evaluate both ploughzone/topsoil evidence and the presence/character of sub-surface features, is not very effective: this method is of limited value for gaining a sound understanding of both the impact of the road scheme on the archaeological resource or its true character and complexity. Trial trenching is at best a blunt instrument that is widely used in commercial archaeology</p>	<p>essentially the same as that employed at Larkhill in connection with the Army Basing Programme. This programme of work, designed and implemented with approval from Wiltshire Council, has successfully identified a new causewayed enclosure and a number of natural solution features, which the 2020 SHLP paper postulates may have formed part of a hypothesised ‘northern arc’ to the ‘new discovery’. It is evident, therefore, that these approaches are both acceptable and effective in identifying and investigating large pit-like features. It is also notable that the 2020 SHLP Paper accepts that the solution features at Larkhill are of likely natural origin, as interpreted by the excavators, and acknowledges that such features can trap cultural material regardless of whether the features may have been of significance to human populations</p> <p>1.2 Trial trenching evaluation</p> <p>Contrary to Garwood, intrusive trenching is a standard archaeological evaluation technique as can be seen in the Chartered Institute for Archaeologists (CIfA) Standard and Guidance for Field Evaluation (2020) (<a href="https://www.archaeologists.net/sites/default/files/CIfAS%26G_Fieldevaluation_2.pdf">https://www.archaeologists.net/sites/default/files/CIfAS%26G_Fieldevaluation_2.pdf</a>) and is not of limited value. It is one of a number of techniques deployed (as indicated above under 1.1 Geophysical Survey) in order to gain a thorough understanding of “the character, extent, quality and preservation [of archaeological remains] ... and enables an</p>
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<p>contexts for rapid extensive invasive site evaluation, yet in itself it is highly destructive (e.g. ploughzone/topsoil deposits are rarely sampled intensively and are reworked and redistributed in backfilling) and sampling scales/intensities often questionable. The conclusions of the main review of the effectiveness of trial trenching (Hey &amp; Lacey 2001) are especially troubling with respect to identifying Neolithic and Bronze Age period features: “no technique used ...yielded even moderate results, although the simulations indicate that dense trenching regimes of (of between 6 and 10%) may be more successful” (<i>ibid.</i>, 59). The A303 trial trenching methodology involved far lower sampling levels, with little testing of ‘geophysical anomalies’. In the western portal approach corridor, including evaluation work in 2002, a total area of c.9300 m<sup>2</sup> of 16.85 ha has been trial-trenched, or 0.055%. In the eastern portal approach corridor trenching is limited only to an ‘evaluation area’ comprising a small part of the DCO on the north side of the existing A303, yet even just within this zone and including previous work the total area trial-trenched is well below 0.5%. There is no reason, therefore, to believe that this sampling regime, even in combination with previous evaluations in the same area, provides a sound basis for evaluating the presence/absence, scale or character of prehistoric evidence in sub-ploughsoil contexts. It certainly includes no systematic evaluation of geophysical anomalies to establish their character or</p>	<p>assessment of their significance in a local, regional, national or international context as appropriate.”</p> <p>With regards to the percentage of trenching undertaken within the footprint of the Scheme (within the impacted area for construction), the Applicant has responded to this on several occasions previously. The Applicant expands on its points to its Comments on Written Representations [REP3013, para. 21.4.7] and our responses to the CBA [TR010025-001126, para. 13.1.7] and to the Consortium of Archaeologists [REP7-021, para. 40.1.2] below:</p> <p>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 [trial trenching in previous iterations of the Scheme since 1990] to achieve an overall sample of up to 5% by area outside of the WHS and between 5% and 10% by area within the WHS (noting that in the majority of areas within the WHS within the construction footprint for the Scheme the percentage sample was closer to the 10% mark), and taking into account the emerging results of academic research programmes undertaken over the last decade.</p>
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<p>provide any means to model anomaly types and their spatial distributions more widely.</p> <p>Trial trenches are also generally shallow, for several practical reasons and also because of the costly and time-consuming requirements of shoring or stepped trenching for safety. As such, whilst it is an effective means of evaluating deep deposits at specific locales, it is especially ineffective for examining deep deposits and features in an extensive manner. In the case of the A303 scheme, only <i>one</i> evaluation trench seriously investigated the extensive deeper colluvial sediments, including buried soils (and in all likelihood numerous buried archaeological features invisible to magnetometry) along the eastern corridor approach (T504; Highways England 2019b). All the other evaluation trenches in this area merely stopped at c.1.5 m depth, and thus provide little information about prehistoric cultural activity along the dry valley, including the potential presence of solution hollows, massive pits, the wider range of ancient features, or deposits across ancient buried land surfaces. The research significance of any such discoveries would be very great, not only in themselves, but also because of the general rarity of buried prehistoric archaeological sites undamaged by surface plough truncation, and the very great rarity of excavations in valley contexts in chalkland environments where it is likely that prehistoric settlement was concentrated (especially in</p>	<p>With regard to the systematic testing of geophysical anomalies, the Applicant has responded to this previously in its Overarching Response [TR010025-001981, section 2.4], noting that “review of the evaluation results demonstrates that across the Scheme, 89% of the ‘features’ revealed in the evaluation trenches corresponded with geophysical anomalies and only 6% of the ‘features’ confirmed as archaeological were not seen in geophysics.” As reported in the Applicant’s Overarching Response [TR010025-001981, para. 2.5.2] large solution hollow feature 241005 was identified by geophysical survey, contrary to Garwood.</p> <p>With regards to the depth of trenches in the eastern portal and approach road, eleven of the twelve trenches undertaken by the Applicant at Stage 3 [for the DCO application – see REP1-047 and REP1-048] were shallow, as chalk bedrock was encountered at between 27cm and 50cm beneath the top of the existing ground surface. Digging deeper would only have encountered further natural chalk bedrock. One trench encountered deeper coombe deposits (Trench 504 – up to 2.50m in depth) which were investigated through trial trenching and borrow hole transects. The narrow coombe deposits in the dry valley have, therefore, been investigated and characterised and environmental samples and geoarchaeological sediment columns taken, assessed and dated. In any event, trial trenching is only one of the techniques in the suite used by the Applicant and, as set out further below, other techniques such as geoarchaeological boreholes, mechanical coring and hand augering were used</p>
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<p>areas close to springs and streams, as in the case of the eastern portal corridor).</p> <p>It is also worth noting again that the one large pit/solution hollow superficially sampled in a test trench in the western portal corridor, Feature 24105 (Highways England 2019a), is not deeply buried (it is plough-truncated) yet it does not seem to have been detected even by magnetometry.</p>	<p>to confirm the interpretation of the geophysical anomalies and the sequences of coombe deposits which Paul's Garwood's submission is concerned would be missed by trenching alone.</p> <p>The Archaeological Evaluation Strategy Report (AESR) and its accompanying and Overarching Written Scheme of Investigation (OWSI) (available at <a href="http://a303scientificcommittee.org.uk/archaeological-reports">http://a303scientificcommittee.org.uk/archaeological-reports</a>) (including proposals for extensive geophysical surveys) were developed in consultation with the HMAG with advice from the Scientific Committee (which included a geophysical survey expert and member of the Hidden Landscapes Project - Professor Vince Gaffney) [REP3-013, para. 56.1.65]. The AESR and OWSI were approved by Wiltshire Council and HMAG and guided the development by Highways England of Site Specific Written Schemes of Investigation (SSWSIs): these SSWSIs were approved, and their implementation on site monitored, by Wiltshire Council and, for sites within the WHS, HMAG. HMAG approved the scope, coverage, area and techniques to be employed in the Applicant's Archaeological Evaluation in the WHS – including the resolution and techniques required for the Applicant's geophysical surveys. The archaeological evaluation results, combining non-intrusive geophysical surveys, ploughzone artefact sampling and testing by trial trenching, form a robust baseline on which to make assessments of the impacts of the Scheme upon archaeological remains. This combination of non-intrusive and intrusive techniques is standard archaeological practice and accords with the Chartered Institute for Archaeologists (CIfA) Standard and Guidance for archaeological field evaluation. Geoarchaeological and environmental sampling and scientific dating were undertaken as part of the evaluation process in consultation with qualified</p>
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specialists, in accordance with the Archaeological Evaluation Strategy Report (AESR, [Highways England, 2018a](#)) and Overarching Written Scheme of Investigation for Archaeological Evaluation (OWSI; [Highways England, 2018b](#)). These were developed in consultation with, and approved by, Wiltshire Council and HMAG, with advice from the Scientific Committee.

Geophysical survey is but one part of the evaluation strategy. The strategy provided for testing of the geophysical survey results through field evaluation – trial trenching, including environmental and geoarchaeological sampling, and coring of deeper features – to confirm the interpretation of the geophysical anomalies. The full picture of the evaluation results – not the geophysical surveys alone – has been taken into account in developing the DAMS [TR010025-001951].

The robustness of the evaluation strategy is demonstrated by the approval by Wiltshire Council and (for sites within the WHS) HMAG of the AESR, OWSI and individual Site Specific Written Scheme(s) of Investigation (SSWSIs); and by the monitoring of the implementation of the strategy on site and approval of the resulting evaluation reports. The suitability and comprehensiveness of the evaluation programme were confirmed in evidence by the County Archaeologist, Ms Pomeroy Kellinger on behalf of Wiltshire Council [REP4-030, items 5 (i) and (ii)]. It is clear therefore that there is no deficiency in the scope or execution of the evaluation strategy. The Applicant stands by its comprehensive and robust evaluations as indicated by Historic England's recent assessment of the Applicant's geophysical surveys in its submission dated 13<sup>th</sup> August [TR010025-001972].



<p>2.24</p>	<p><b>2.3 Evaluation of the DAMS in the light of new discoveries and the flawed nature of the archaeological evaluation process</b></p> <p>At present, therefore, there is very little reliable data for detecting even large archaeological features, or for evaluating them effectively, in the eastern part of the DCO, while the wider range of supposed ‘evaluation data’ is insufficient for developing an overarching archaeological mitigation strategy or coherent field methodology in any part of the DCO. In effect, despite the archaeological evaluations that have taken place, it is currently impossible to predict the scale, density, complexity or significance of any subsurface archaeological evidence that might be encountered in the course of larger-scale work. In this light, and taking account of the many other fundamental flaws in the DAMS highlighted on many previous occasions (e.g. the complete inadequacy of proposed ploughzone sampling, of huge importance for understanding past landscape inhabitation; Parker Pearson 2019; Garwood 2019c), it is apparent that the DAMS provides no effective framework for archaeological investigation along the line of the A303 road scheme within the WHS. It should be discarded, and a more credible strategy developed instead based on:</p> <p>(1) a new, reliable Heritage Impact Assessment (see section 1.3)</p>	<p>The Applicant refers the Secretary of State to Point 2.23, and indeed other responses, above with regards to the robustness, reliability and comprehensiveness of the Applicant’s archaeological evaluation and the data collected, on which the Detailed Archaeological Mitigation Strategy (DAMS) [TR010025-001951] is based. Please also see the Applicant’s Overarching Response addressing the ‘new discovery’ [TR010025-001981] previously submitted. Fundamentally, both the archaeological evaluation strategy and DAMS are robust and fit for purpose and, contrary to Paul Garwood’s point that ‘it is currently impossible to predict the scale, density, complexity or significance of any subsurface archaeological evidence that might be encountered in the course of larger-scale [archaeological field]work’, the archaeological evaluation results do provide a robust and comprehensive set of results in order to predict the scale, density, complexity and significance of the archaeological remains likely to be encountered during large-scale archaeological fieldwork in advance of Scheme construction. The DAMS [TR010025-001951], however, provides a reflexive and iterative approach to respond to the significance of the archaeological remains, and develop and respond to appropriate research questions, as the archaeological remains are uncovered, as well as providing a strategy for unexpected finds.</p> <p>The DAMS [TR010025-001951] and its Archaeological Research Agenda (ARA) provide mechanisms to ensure a flexible response to the archaeological resource that address relevant research questions. The approach of the DAMS is based on developing site-specific research questions and focusing site decision-making on addressing these. The DAMS provides ample scope to address discoveries during the mitigation programme, and to take account</p>
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	<p>(2) more reliable and more comprehensive evaluation data; for example: (i) full Ground Penetrating Radar and EMI survey; (ii) characterization and evaluation of geophysical data and feature/deposit types; (iii) more extensive, and more effective investigation of deep sediments in valley contexts to define their archaeological significance robustly; (iv) excavation of samples of larger features (e.g. to their bases) and buried land surfaces in order to define them and evaluate their research potential.</p> <p>(3) development of a field methodology that takes full account of (1) and (2), and applies sampling strategies (e.g. 100% ploughzone sampling, 100% excavation of all anthropogenic features, and all 'natural' features and deposits that contain cultural material) that are appropriate to the WHS, its OUV attributes, and the extraordinary cultural significance of the Stonehenge landscape.</p>	<p>of emerging discoveries and theories within and in the vicinity of the WHS.</p> <p>Wiltshire Council and Historic England consider that the DAMS and its ARA provide an appropriate basis for development of site-specific research questions and SSWSIs. Wiltshire Council's response to the Secretary of State's Consultation of 16 July 2020 states: "The Council sees no need for a wholesale review of the key scheme documents which are comprehensive and compliant" and "The DAMS and forthcoming SSWSIs provide a mechanism for fully assessing any further such features which may be discovered during the mitigation phase on the road line and portals, in the unlikely event that they have not been picked up during the evaluation." [TR010025-001968, sections 2.4 &amp; 2.5]. Historic England's closing submission [AS-111] confirms, "We believe that the dDCO, OEMP and DAMS set out a process to ensure that heritage advice and considerations can play an appropriate and important role in the construction, operation and maintenance of the Scheme [...] we consider sufficient safeguards have been built in for the detailed design stage". Historic England's response to the Secretary of State on 13th August, states with regards to the DAMS [TR010025-001951]: "In our opinion the provisions in the Detailed Archaeological Method Statement (DAMS) are sufficient to enable the Site Specific Written Schemes of Investigations (SSWSIs) to draw on the implications of the SHLP research in finalising the detailing of the programme of archaeological mitigation should the Scheme be granted consent. Safeguards have been included within the DAMS and Outline Environmental Management Plan (OEMP) to facilitate</p>
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the integration of the matters raised by the research into the approach taken to the Scheme.” In addition, the National Trust, in their response [TR010025-001975] state: “This reflexive approach, coupled with the promotion of high quality research has the ability to ensure the archaeological mitigation undertaken as part of the Development responds appropriately to any new information, and discoveries in order to appropriately hone both the creation of SSWSIs, and to allow for further modification in light of additional information that comes to light during the course of fieldwork.” [TR010025-001975, para. 6.1.7].

The Applicant further details the fitness for purpose of the DAMS in their Overarching Response addressing the ‘new discovery’ [TR010025-001981, Section 5].

The Applicant refutes that a new Heritage Impact Assessment is needed – the existing HIA [APP-195] is robust, thorough and rigorous, as confirmed by Historic England, the government’s statutory adviser on all matters relating to the historic environment, including world heritage [REP9-038, paras. 1.7.1-1.7.3; 2.1.1–2.2.10; TR010025-001972, paras. 2.4.7; 2.4.10].

With regards to 100% sampling of the ploughzone, this has been addressed at length in previous submissions to the Examination (see for example the Applicant’s response to the CBA in REP9-022, para. 18.2.2).

With regards to 100% excavation of all anthropogenic features and all ‘natural’ features and deposits that contain cultural material, these points are covered in the Applicant’s Overarching Response to the Secretary of State on the 13<sup>th</sup> August 2020 [TR010025-001981, para. 5.4.3].



## Representation from Prof Vincent Gaffney et al

2.25	<p>It should be emphasised that the publication of the Durrington pits within Internet Archaeology provides only a preliminary assessment of the significance of the monument, and primarily emphasised it's character, the immediate context of the structure, and the available dating evidence (Gaffney et al. 2020). Whilst some comment was made on the presence of features of comparable within the Stonehenge landscape, significant work remains to be undertaken at the site including further study of the environmental evidence from cores taken from the pits and, ultimately, the larger landscape context of the monument.</p>	<p>The Applicant acknowledges the comment by Prof Gaffney et al. regarding the tentative and preliminary nature of the results as presented in the 2020 SHLP Paper. This is consistent with the responses as put forward by Historic England {TR010025-001972}, Wiltshire Council [TR010025-001968], English Heritage [TR010025-001970] and the National Trust[TR010025-001975] on the 13th August and confirms the very limited weight that can be attached to the conclusions of the publication.</p>
2.26	<p>Key considerations, when discussing the relationship of the Durrington pits to the larger landscape, relate to the nature of development within the larger Stonehenge landscape. Current interpretation of the Durrington and Stonehenge monuments suggests that they relate to larger territories with some level of exclusivity (<a href="#">figure 2</a>, see also Parker Pearson and Ramilisonina. 1998). In respect of Stonehenge, most archaeologists would recognise the concept of the Stonehenge Envelope as an important aspect of the character of the henge. This area represents the near, visual territory of Stonehenge and is further defined by the clustering of later burial mounds around the near horizons of the monument and a general lack of</p>	<p>Regarding the bounding of space, the deliberate placing of barrows and the structuring of the landscape see the Applicant's response at Point 2.6 (1) and (2) above. These aspects, at the scale indicated by Prof Gaffney et al., have been considered in the Applicant's HIA [APP-195] including the contribution of the Exon et al. 2000 study [APP-195, paras. 5.3.26, 6.2.1, 6.9.12, 6.9.16, 6.9.17, 6.9.22, and throughout the Asset Group assessments, pages 177–443] and the Applicant's Setting Assessment [APP-218, para. 3.6.8] which were submitted with the DCO application.</p>



contemporary monuments within that area. The discovery of the Durrington pits, which appear to provide a similar boundary function, albeit uniquely defined by massive pits, may confirm the position that the bounding of very large spaces is a key characteristic of the landscape that has not been fully appreciated previously.

The underlying visual property of the Stonehenge Envelope is an important point when considering the nature of such territories. Stonehenge clearly demonstrates the capacity of pre-existing monuments to structure the later landscape at an extreme scale, and through the tendency for Bronze age monuments to cluster at the edges of horizons viewed from individual monuments ([figures 3](#) and [4](#)). As such, this is primary evidence to show that a large area of land was directly associated with the monument, and that such areas possessed a contemporary, and interrelated, significance and value.

There is, however, a larger context with respect of the structuring of the later Neolithic and Early Bronze age monument data within the Stonehenge landscape. A statistical study of barrow placement across a 13 x 13 km block of landscape around Stonehenge, undertaken twenty years ago, demonstrated the broader link between major Neolithic monuments and later barrows/ring ditches placement on the basis of intervisibility (Exon et al. 2000). This study concluded that;

- Early monuments were deliberately positioned to have large viewsheds (illustrated by models of monument placement generating a value of 75.4 for actual placement/random placement versus a random



	<p>placement/random placement value of 48.9).</p> <ul style="list-style-type: none"> <li>• Monuments have been preferentially sited within the viewsheds of the pre-Bronze Age monuments (illustrated by models of monument placement generating a value of 113.3 for actual placement/actual placement versus an actual placement/random placement value of 75.4). This can be interpreted to mean either that the barrows are intended to be visible from the pre-existing foci or that they are intended to have views towards them.</li> </ul> <p>Monuments are also positioned to be more visible than expected even from arbitrary positions within the study area (illustrated by models of monument placement generating a value of 64.7 for random placement/actual replacement versus a random placement/random placement value of 8.9).</p> <p>The study therefore indicated that majority of major Neolithic monuments had extensive visual territories and that these that contributed to the underlying, larger structure and form of the monumental landscape through the placement of later prehistoric monuments. This characteristic has not generally been considered throughout the planning process, despite clearly being significant in terms of the landscape structure and how contemporary curators should manage the landscape.</p>	
2.27	<p>As the Durrington pit circle had not been discovered at the point that this large statistical analysis was undertaken, the site has not been studied at that level. Whilst this would clearly be desirable, it is possible to consider whether such</p>	<p>As stated in the Applicant's Setting Assessment [APP-218, paras. 3.6.8–3.6.9] (emphasis added):</p>



processes may be detected in respect of the Durrington pit circle, by considering the visible areas associated with the pit group overall ([figure 5](#)), and the associated site of the Larkhill causewayed enclosure, which is clearly integrated within the circuit ([figure 6](#)).

In doing so, attention is drawn to the position of three barrow groups within the viewshed of Stonehenge, and which are central to the concept of the Stonehenge Envelope:

- 1 The Cursus Group
- 2 The King barrow Ridge groups
- 3 The Normanton Down group

These barrow groups formalise the visual territory of Stonehenge on the northern, eastern and southern edges, and also figure prominently within the composite viewsheds of the pit circuit ([figure 5](#)) and the Larkhill causewayed enclosure ([figure 6](#)). Although it would be advisable to re-run the original statistical analysis of the larger landscape structure to assess the significance of this observation, the general conclusion that monument placement is a structured phenomenon does seem a reasonable position.

Following from that, we may also conclude that the commonality of these barrow groups within the visual territories of both Stonehenge and the Durrington complex, and the linkage between Durrington, Stonehenge and Larkhill, is a real phenomenon and that this should be considered in any proposed development within the world heritage landscape.. Moreover, when Larkhill and Durrington viewsheds are combined ([figure 7](#), ) the area of

*“This landscape has been the subject of several intervisibility studies, perhaps the most prominent of which is Stonehenge Landscapes: journeys through real-and-imagined worlds (Exon et al. 2000). This adopted a digitally-driven analytical approach which considered, alongside other aspects, both static viewsheds and experiential traverses through the Stonehenge environs. Though drawing from a quantifiable baseline, this study was a deliberately speculative work. In considering the visual aspects of the ancient landscape it also contended with major problems – the first and most fundamental being whether inter-visibility mattered at all, and if so in which cases? Furthermore, as the authors acknowledged, the study was hampered (amongst other things) by the lack of accurate monument dates for practically all of the barrows, and by uncertainty about the extent to which the Stonehenge landscape was wooded, therefore precluding inter-visibility. The temporal aspect adds further complexity, given the dynamic nature of monument building, woodland clearance, and the changing uses of the landscape during late prehistory and in subsequent periods.*

*In respect of inter-visibility, the present setting assessment adopts an approach in which it acknowledges where sightlines exist between monuments and Asset Groups in the present day. These are considered a positive attribute of setting for the modern visitor, without prejudice to whether it was a salient factor to those in the past. Retention or re-establishment of sightlines is considered positive; severance is considered negative. The assessment of a given asset does not attempt to consider all visual interconnections, focusing instead on those which are readily apparent and/or most prominent, irrespective of*



	<p>the Stonehenge Envelope is essentially incorporated within the combined visual territory of the Durrington monument complex overall. This may suggest that integration was a key characteristic of the Stonehenge and Durrington groups and that the two monument clusters are best considered as single group with respect of cultural heritage management and curation.</p>	<p><u>how great the intervening distance. These have been identified from on-site observations, without recourse to existing GIS datasets, which attempt to present a more comprehensive picture of monument inter-visibility, but which are nevertheless still subject to the methodological issues discussed above.”</u></p> <p>In the view of the Applicant (supported by expert advisers) ,to use computer generated viewsheds, that suffer from the theoretical problems as highlighted above, and then to set forward an argument based on viewsheds only (and is acknowledged to be in need of statistical analysis) that is claimed to be a 'real phenomenon', is highly problematic and not a sound basis for planning decisions. The Applicant has taken the approach of assessing setting and inter-visibility between assets and Asset Groups on the ground, using real world observations, in the present day, in its setting assessment [APP218] as well as considering this alongside bare-earth modelling in the HIA [APP-195, paras. 5.3.30–5.3.31] and in the HIA Addendum [TR010025-001980, para. 2.1.1].</p> <p>With regards to considering Stonehenge and the 'new discovery' as a single group, see Points 2.5 and 2.6 (5) above.</p>
2.28	<p>One other significant point from the Exon publication should be raised here, and this relates to the linking role of the Stonehenge Avenue. Although usually regarded as primarily a processional way, linking Stonehenge to the Avon, Gardiner notes that the route taken by the Avenue is not the most direct approach to Stonehenge (<a href="#">figure 8</a>. See also Cleal <i>et al</i> 1995, 40). Detailed study by Exon et al. (2000,72) further</p>	<p>With regards to considering Stonehenge and the 'new discovery' as a single group, see Points 2.5 and 2.6 (5) above.</p> <p>With regards to the Avenue, the Applicant has provided a thorough response on the impacts of the Scheme on the Avenue in - Comments on the DAMS and on any further information requested by the ExA and received to Deadline 3 [REP4-036, para. 13.1.18]. The Avenue, including its setting and how movement / traversing along it contributes to its significance, is</p>



<p>suggested that the Avenue has a series of sections with different characteristics and ambient views.</p> <ol style="list-style-type: none"> <li>1. At the River Avon. The view is very restricted within the river valley. It is the point with the very least visibility score along the whole Avenue route. At this point a single long barrow, Amesbury 140 is visible, as well as the Coneybury King Barrow.</li> <li>2. Moving uphill a number of long barrows become visible as one moves forward. Besides Amesbury 140, Bulford, the long barrow south of Woodhenge, the long barrow south of Fargo Road, Knighton Down and Knighton Barrow emerge only a short distance along the first stretch of the Avenue. Indeed, this first linear section is aligned on the Knighton long barrow. At the same point the viewer can now see Woodhenge, the Cuckoo Stone and the position of the Coneybury Anomaly. The Coneybury King Barrow, very prominent on the skyline, appears to be frequently visible along the route. Roughly at the first bend, Robin Hood's Ball comes into view for the first time.</li> <li>3. The top of King Barrow Ridge possesses a very wide view, wider even than that from Stonehenge. The Cursus Barrows, Fargo henge, the Stonehenge Cursus and eight long barrows become visible. Stonehenge, Woodhenge, and the barrows in the Lake Group (but not Wilsford) are all prominent.</li> <li>4. Downslope from the ridge to the west. Halfway down the slope, the Cursus Barrows and the Fargo mini-henge disappear from view, but Robin Hood's</li> </ol>	<p>carefully considered in both the setting assessment [APP-218, pages 66-68] and the HIA [APP-195, pages 354-356].</p> <p>The Applicant does not agree with Prof Gaffney's comments "uncritical development, as proposed by the A303, will unwittingly cause substantive damage to how we understand and appreciate this unique landscape."</p> <p>The Applicant notes that the existing A303 surface road currently severs the Avenue just to the east of King Barrow Ridge and has a Large Adverse effect on this scheduled monument. In comparison the Scheme will result in a Large Beneficial effect on the Avenue [see the HIA, APP-195; pages 354-356] through the removal of the existing severance caused by the current A303, the removal of much of the existing aural and visual intrusion of traffic on the A303, the restoration of the physical connectivity along much of this important prehistoric ceremonial route, and improvements to the integrity and setting of the monument.</p> <p>The Applicant has considered the impacts of the Scheme in its HIA Addendum [TR010025-001980, paras. 3.3.50-3.3.62], including impacts to fabric, setting, inter-visibility and stated inter-relationships with other assets and asset groups as set out in the 2020 SHL Paper. The Applicant does not agree that the proposed location of the Eastern Portal and the dual carriageway and associated infrastructure will destroy the vista to the north-east towards the 'new discoveries'. The road tunnel has been carefully and sensitively designed as far as possible to reduce the impact of the current road and its existing cuttings and hide the portal with a grassed canopy. The portal entrance has also been positioned within the head of a dry valley to further utilise the existing landform to conceal it and the new section of road as far as</p>
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<p>Ball and much of the Cursus are still visible.</p> <ol style="list-style-type: none"> <li>5. At the lowest point, beyond the second bend of the Avenue. No henges or major barrow group locations are visible, but three long barrows, Robin Hood's Ball and the round barrows on the eastern fringes of the envelope can be seen all the time.</li> <li>6. Moving uphill from the second bend. Rox Hill is visible to the south, but then disappears. Then, for the first time since it came into view at the first bend, Robin Hood's Ball disappears as does Stonehenge itself. Then Rox Hill also disappears.</li> <li>7. Last third of the last straight. Robin Hood's Ball returns to view, then Stonehenge, firstly as the main object, outlined against the sky, and then against the background of the low Normanton and higher Wilsford/Lake ridges.</li> </ol> <p>Sections two and three relate to those areas where the southern and western route of the pit circle is now known to run. <a href="#">Figure 8</a> illustrates the original illustration from Exon et al. 2000, figure 7.5). The authors of this study considered that the route of the Avenue was essentially chosen to provide a changing pattern of views when walking along the Avenue route from east to west, and that the route of the processional way was designed to integrate these diverse areas as the viewer moved along the processional way.</p> <p>This point has recently been taken further by Simon Banton</p>	<p>possible in views from Asset Groups such as the Avenue, the Avenue Barrows and the Countess Farm Barrows. The Scheme also allows the line of the Avenue to be reconnected where it is currently severed by the existing A303 surface road improving landscape connectivity and enables the existing A303 surface dual carriageway from Stonehenge Road to Vespasian's Camp to be removed and replaced by chalk grassland.</p>
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	<p>(<a href="http://www.stonehengemonument.co.uk/2020/07/avenue-walk-and-durrington-walls-pits.html">http://www.stonehengemonument.co.uk/2020/07/avenue-walk-and-durrington-walls-pits.html</a>) , specifically in relation to the new discoveries.</p> <p>1.1.6 Together, these detailed studies strongly suggest that the significance of the Avenue is to integrate the Stonehenge and Durrington monument complexes as a single unit. The tendency for impact assessment of the Stonehenge landscape to treat monuments individually therefore misses a critical characteristic of the Stonehenge landscape. This is specifically illustrated in <a href="#">figure 7</a>. Here, the inset within the figure illustrates the likely visual connections of the eastern sector of the road scheme with the Durrington complex. Consequently, there is a real need for an assessment that treats the Stonehenge and Durrington groups as a single unit. If this is not undertaken, uncritical development, as proposed by the A303, will unwittingly cause substantive damage to how we understand and appreciate this unique landscape.</p>	
<p><b>Representation from Brian Edwards</b></p>		
2.29	<p>1.1.7 <b>1. Implications for the Development and any harm it may cause to the WHS</b></p> <p>1.1 The existence and dating of the pits show them to be associated with most, if not all, of the Attributes of OUV of the WHS.</p> <p>1.1.1 In view of the new discoveries, recognition of the</p>	<p>The Applicant has carefully considered the ‘new discovery’ in relation to the Attributes, Integrity and Authenticity that convey the OUV of the WHS and the impacts of the Scheme upon the OUV of the WHS in its ES and HIA Addenda [TR010025-001979 and TR010025-001980], taking the conclusions of the paper proposing the ‘new discovery’ at face value.</p>



<p>existence and relative positions of the Durrington Walls pits to the Avenue is sufficient to highlight that the proposed site of the eastern tunnel portal, together with accompanying noise and exhaust plume from a far busier, faster A303, would compromise the OUV of the WHS.</p> <p>1.2 It is evident from the scale of the Durrington Walls pits that they were a significant presence in the landscape. Awareness of these features could have been experienced in many ways varied by any number of factors, but consciousness of them was not necessarily reliant on visual features such as upstanding poles.</p> <p>1.2.1 Through subsequent discovery, the Durrington Walls pits have been found to be integral to a vista with a distinct topographical relationship to an extensive stretch of the Avenue.<sup>5</sup></p> <p>1.2.2 The relationship of the Durrington Walls pits to both the eastern vista of the WHS and the Avenue, underlines that these subterranean features are elements of Attribute 6 of OUV of the WHS (see above).</p> <p>1.2.3 This vista comprising the monumental landscape to the east of Stonehenge has long been of a particular interest to antiquaries and writers, so meets Attribute 7 of the OUV of the WHS (see above).</p> <p>1.2.4 An obvious example can be drawn from William Stukeley (1687-1765).</p> <p>1.2.4.1 Stukeley's interest detailed in such as his plan of a 'Prospect of Stonehenge from the East by Vespasian's</p>	<p>With regards to impacts from the Scheme on the Avenue and its relationship with the 'new discovery', please see the Applicant's response above at Point 2.28.</p> <p>In considering the position of the eastern portal, the Applicant would first highlight the current impacts of the A303 surface dual carriageway on the Avenue:</p> <p>As described in the HIA [APP-195, pages 353-354], the existing A303 has multiple negative effects on the setting of the Avenue, including severing the route with a surface dual carriageway making it unsafe to cross, restricting visitor access and precluding an uninterrupted line of travel along the length of the monument (should land access allow in the future); the A303 surface road imposes a visually intrusive presence, imposes audible intrusive presence particularly where the monument is currently severed, produces light pollution diminishing the appreciation of its astronomical associations and intruding on its solstitial alignment. The negative impacts of the existing A303 on the Attributes of OUV expressed by the Asset Group is assessed as Moderate. Consequently, the significance of effect of the existing A303 on the Attributes of OUV expressed by the Asset Group is assessed as Large Adverse.</p> <p>The Applicant has considered the impacts of the Scheme on the 'new discovery' in its HIA Addendum TR010025-001980, paras. 3.3.50-3.3.62], including impacts to fabric, setting, inter-visibility and stated inter-relationships with other assets and asset groups as set out in the 2020 SHL Paper.</p> <p>With regards to the Scheme (including the proposed eastern portal) and its impacts on the Avenue this is set out clearly in the Applicant's response to the CBA [REP4-036, para, 13.1.18]:</p>
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<p>Camp' (Fig.2),<sup>6</sup> and his commentary highlight the clarity of visibility that can be drawn from this sector of the WHS:</p> <p>'I suppose the end of the avenue upon the hill North of Vespasians Camp northwest from Amesbury church. Here the horizon opens from Northwest to Southeast to the Avon so that you may see down the river nearly to New Sarum &amp; upwards with all the hilltops east of Amesbury conspicuous for a great distance, it takes in a long scene of country considering tis not the highest ground hereabouts, but then tis near the river where their groves were, &amp; has a fine gentle rise for half a mile &amp; more. The hedges hereabouts towards the river are charmingly adorn'd with viorna. &amp; Avon is a delightful river flank'd on both sides thick with villages &amp; good land at the skirts of the downs.'<sup>7</sup></p> <p>1.2.4.2 The clarity with which the surviving monuments were readily related to the topography and skyline, is also evident in Stukeley's 'Prospect from the west end of the Cursus of Stonehenge' (Fig.3.),<sup>8</sup> in which the antiquary recorded the eastern horizon between the eastern terminus of the Cursus and what he refers to as the 'eastern wing of the avenue' (Fig.4.).</p> <p>1.2.4.3 The expectation of his peers in respect of the accuracy and potential of this survey, is recalled through such as his friend Roger Gale (1672-1744) hoping Stukeley will 'come home like another Columbus from the discovery of a new world'.<sup>9</sup> In a way he did, not least as Stukeley was the first to highlight that the Avenue 'answers to the principal line of the whole work, the north-</p>	<p><i>"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)."</i></p> <p><i>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] [the Secretary of State should note that the northern part of the Countess Farm Barrows is sited in a similar position to the southern arc of the 'new discovery']. 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) &amp; Table 6.12: Summary of significant effects – operation (permanent)].</i></p> <p><i>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)."</i></p> <p><i>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.</i></p>
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<p>east, whereabouts the sun rises, when the days are longest'.<sup>10</sup> He further added that 'the intent of the founders of Stonehenge, was to set the entrance full north east, being the point where the sun rises, or nearly, at the summer solstice'.<sup>11</sup> Recalling Gale's heightened anticipation, David Haycock also cites the scientist William Derham (1657-1735) urging Stukeley to reveal 'whence these stones were brought, and by what carriage and mechanism'.<sup>12</sup> In short, this eastern sector stretching between the Avenue, Durrington Walls and the course of the Avon, with its characteristic skyline beyond, isn't just fundamental to understanding the prehistoric landscape but demonstrates that the nature of this discovery and its acceptance are important.</p> <p>1.2.5 As noted by John Soul (1866-1942), Vespasian's Camp was adopted for overnight vigils prior to travelling to Stonehenge for the summer solstice in the interwar period, something the eastern vista evidently played a significant role in. The author of several works on Amesbury and also Stonehenge, Soul initiated in 1921 a specific interest in remains at Vespasian's Camp which was eventually scheduled on 2 May 1940. The overnight vigil in the east apparently complemented an interwar solstice ritual that terminated to the west following the solstice.<sup>13</sup></p> <p>1.2.6 The Durrington Walls pit vista being in view for an extensive stretch of the Avenue until, turning at King Barrow Ridge, it is replaced by a vista which includes Stonehenge, highlights that these subterranean pit features might once have had an acknowledged if not spontaneous relationship to the upstanding stone monument. This relates the Durrington Walls pits to</p>	<p><i>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],</i></p> <p><i>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."</i></p> <p>It is therefore clear that the positioning of the eastern portal and the removal of the A303 surface road from severing the Avenue monument would not have the negative impacts as Brian Edwards suggests. It will allow a better understanding and appreciation of the Avenue and its setting (including views to the north-east towards the 'new discovery') within the context of the WHS and facilitating safe visitor access, thus sustaining the OUV of the WHS.</p> <p>The contributions of William Stukeley to the study of Stonehenge are considered in detail by the Applicant in the various Annexes to the HIA [APP-195] including the Environmental Statement Appendix 6.1 Annex 4 - Previous archaeological and antiquarian investigations within the Stonehenge part of the WHS [APP-199]; Environmental Statement Appendix 6.1 Annex 5 - Astronomy and Archaeoastronomy [APP-200]; the Environmental Statement Appendix 6.1 Annex 6 - Influences of the monuments and landscape of the Stonehenge part of the World Heritage Site on architects, historians and archaeologists [APP-201]; and the Environmental Statement Appendix 6.1 Annex 7 – Influences of</p>
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	<p>Attribute 1 of OUV (see above).<sup>14</sup></p> <p>1.2.7 Furthermore, it can be shown that Stonehenge and Durrington Walls henge are linked to each other via avenues and the river. Therefore it could be argued that this also lends credence to the possibility that the Durrington Walls pits were also thus both spatially and understood to be associated with the Stone monument.</p> <p>1.3. The discovery of the Durrington Walls pits has recently been complemented by another widely acclaimed discovery, that of the 'Origins of the sarsen megaliths at Stonehenge'.<sup>15</sup></p> <p>1.3.1 The location of West Woods being promoted as the original location of the vast majority of Stonehenge's sarsen megaliths, has resulted in discussion surrounding two potential routes for their possible transportation by human effort between these sites: a route requiring either the ascent of the very steep slope of the scarp of the Plain, or the river valley route along the Avon.<sup>16</sup> The southern arc of the Durrington Walls pits would have been the setting of the last leg of the latter, easier route.<sup>17</sup></p>	<p>the monuments and landscape of the Stonehenge part of the World Heritage Site on artists [APP-202].</p> <p>With regards to spiritual aspects and intangible heritage, the Applicant has considered this, including the celebration of the solstice in its HIA [APP-195, section 6.16].</p> <p>Regarding routes of movement for the Sarsens being brought to Stonehenge via land or by water, this has been the subject of debate for centuries since William Lambarde in the late 16<sup>th</sup> century astutely identified the origin of the Sarsen stones as coming from an area above Marlborough [APP-199, page 3], and recently clarified by chemical analysis as coming from West Woods. The Scheme does not prevent further questions regarding this being asked or researched and the reflexive iterative strategy in the DAMS [TR010025-001951] gives the necessary flexibility for mitigation to respond to them, if appropriate.</p>
2.30	<p>1.4 An increasingly noticeable factor in respect of knowledge is that since inscription, in 1986, there have been continual archaeological discoveries in relation to the WHS.<sup>18</sup> Whether in the field or the archive, these discoveries more often than not give rise to a need to revisit interpretation, in turn leading to the re-examination of archaeological records and antiquarian researches in context in the landscape. Advances in technology add yet another dimension, and this continual process consistently</p>	<p>The Scheme will not prevent archaeological research within the WHS. The archaeological research that will be undertaken in advance of Scheme construction will add to the great corpus of archaeological research that has already been undertaken within the WHS. The records and finds, once published, will be available for re-analysis, re-interrogation and reinterpretation once the archive has been assembled and deposited with a Museum (see for example the Applicant's response to submissions received at</p>



<p>highlights that it is the whole of the WHS and its setting that is important, not merely the central focus and fame associated with the stones.</p> <p>1.4.1 In contrast, the proposal of a destructive short tunnel in relation to the A303 at Stonehenge that arose during this same period,<sup>19</sup> has inevitably seen spiralling costs as the design was repeatedly altered in length and construction as successive attempts wrestled with the inherently destructive nature of its creation. That the road scheme has been prioritised, without any advance in understanding, over what is actually important about the WHS, could not have been made more obvious in the response of Highways England to the Durrington Pits discovery:</p> <p>'This find is in the north east corner of the World Heritage Site, well outside the scheme boundary and at its closest point half a kilometre north of the planned A303 upgrade past Stonehenge.'<sup>20</sup></p>	<p>Deadlines 5 and 6, items 31.1.5, 6.34 and 6.3.5.5 [REP7-021]) as is the case with ongoing academic research, once published.</p> <p>The comprehensive Detailed Archaeological Mitigation Strategy (DAMS) [TR010025-001951], developed in consultation with HMAG, and with input from the Scientific Committee, seeks to capture current research questions and is reflexive and iterative in order to respond to developing theories, interpretations and technologies as the design of the archaeological mitigation works is progressed, and to address new discoveries during the mitigation programme. Heritage consultees have also confirmed in their submissions that the DAMS is fit-for-purpose and that the dDCO, Outline Environmental Management Plan (OEMP) and DAMS ensure that heritage advice can play an appropriate and important role in relation to the Scheme detailed design [see Historic England's closing statement to the Examination - TR010025-001736, para. 1.7].</p> <p>With regards to the point made by Brian Edwards that 'it is the whole WHS and its setting that are important, not merely the central focus and fame associated with the Stones', the Applicant has not focussed its HIA [APP-195] on Stonehenge, but has taken a holistic approach to the assessment – see the Applicant's response at Point 2.5 above.</p> <p>With regards to the Scheme design, the Scheme has been carefully and sensitively designed to avoid archaeological remains wherever possible and to hide the Scheme within the landscape, including in key views from sensitive heritage assets and receptors.</p>
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		<p>The Scheme will improve the visitor experience by transforming the WHS landscape, reconnecting the two halves of the WHS, which are currently severed by the surface road. Connectivity into and through the WHS will be improved through the placement of the road in bored tunnel and the provision of new and enhanced public rights of way across the landscape.</p> <p>Cultural Heritage Design Commitments are set out in the Outline Environmental Management Plan [OEMP; TR010025-001949, table 3.2b]. These include specific design parameters related to road geometry and scale, land-take, lighting, signage, boundary fencing and gates to ensure that the Scheme is visually recessive and sympathetically integrated within the WHS.</p> <p>Design Principles are set out in the OEMP [TR010025-001949, chapter 4 and table 4.1] and the Design Vision Overall Aims are stated in the OEMP at para. 4.2.6.</p> <p>With regards to the 'new discovery', its contribution to the OUV of the WHS, and the impact of the Scheme upon this, please see the HIA Addendum (TR010025-001980).</p>
<p><b>Representation from Prof David Jacques</b></p>		
2.31	<p>The new scientific results, together with the new discovery of the monumental pits demonstrate:</p> <p>a. that the survey techniques of Highways England have been wholly inadequate,</p>	<p>Regarding the quality and adequacy of the archaeological evaluations undertaken by the Applicant, please see Point 2.33 above.</p>
2.32	<p>b. decisions over the positioning of the portals as being somehow 'less sensitive' in heritage terms are unsafe.</p>	<p>With regards to the design decision process and the locations of the portals, please see the Applicant's response at Point 2.16 above.</p>



<p>2.33</p>	<p>Further, the new results add to the heritage significance of Blick Mead and emphasise the importance of ensuring that its water table is not damaged.</p>	<p>The Applicant clearly explained the importance of the Blick Mead site at ISH1 Cultural Heritage, where it stated “The EIA and HIA had assessed Blick Mead as of national importance, equivalent to it being a designated heritage asset and a scheduled monument but did not afford it OUV status since it is not of the periods for which the WHS is inscribed” [REP4–030, Question 8 (i)]. The 'new discovery' is not dated to, or interpreted to be of Mesolithic date in the 2020 SHLP paper and, therefore, does not add to the significance of the Blick Mead site.</p> <p>With regards to the water table and the Blick Mead site, the Applicant has responded throughout the examination with regards to the impacts on the Scheme on the hydrology of the Blick Mead site [REP3-016, Written Questions Fg 1.26, Fg 1.27, Fg 1.28; REP4-030, ISH2 items 8 (i), (ii), (iii) (iv); REP4-036, para. 8.2.8; REP5-003, paras. 34.1.63 - 34.1.74; REP7-021, paras 40.1.6 - 40.1.8; REP8-013, paras 2.1.23 - 2.1.26; REP8-016, ISH8, item 8; REP8-018, ISH10, item 7(i); REP8-019 ISH11, item 4.9 (iv); REP9-022, paras., 12.1.8 - 12.1.12, 12.2.2 - 12.2.3, 12.3.1, 18.1.2, 21.2.4-21.2.7].</p> <p>In its response to Comments on any further information received by the ExA and received to Deadline 8 [REP9-022, para 18.1.12], the Applicant stated:</p> <p><i>“The Applicant has responded previously... regarding the need for ‘a bespoke heritage-led approach’ with regards to the preservation of waterlogged deposits at Blick Mead, in the Applicant’s Written Summary of Oral Submissions put at the Hearings in June 2019 [REP4-030]; agenda item 8 (iii), where it stated that it ‘confirmed that the [tiered] assessment had been undertaken carefully and fully. The assessment confirmed that no element of the scheme is likely to have a material effect upon the hydrology of Blick Mead</i></p>
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*and no mitigation would be required to preserve the significance of Blick Mead.’ The tiered assessment [APP-282] has been accepted by Historic England as being undertaken adequately and following its guidance – Preserving Archaeological Remains Decision-taking for Sites under Development (Historic England 2016). As no element of the Scheme is likely to have a material effect upon the hydrology of Blick Mead, a bespoke solution is not required.*

*The groundwater levels and rainfall and drainage at Blick Mead would not be affected by the Scheme and therefore there is no mechanism for hydrological impacts at Blick Mead. Given that no significant effects are predicted at Blick Mead [APP-282], additional investigations into the detail of Blick Mead and site specific modelling would not change the outcome of the assessment. (paragraph 11.1.2 [REP5-003]).*

*The importance of the Blick Mead site is recognised by Highways England and provisions are made in the draft Development Consent Order through the OEMP [REP8-006] for Blick Mead to be included in the Groundwater Management Plan (MW-WAT10) as follows:*

*‘f) In respect of all of the above matters, the Plan must specifically indicate how Blick Mead and private water supplies are to be considered.*

*During the development of the Groundwater Management Plan, the main works contractor shall consult with the Environment Agency and Wiltshire Council with regard to the groundwater flood risk component and any heritage implications to Blick Mead.”*

*In its closing statement to the examination [TR010025-001775] the Applicant states the following at paras. 8.4.1 - 8.4.5:*

*“Blick Mead was specifically considered in the Groundwater Risk Assessment (GRA) [see Annex 3 of APP-282], and additional*



*monitoring undertaken as reported in submission AS-015, leading to the conclusions of no effect reported in the ES, and expanded upon in Examination (see, for example, paras 3.4.2 to 3.4.7 of [REP3-013]). Nonetheless, it is understood that some Interested Parties are still concerned as to the potential for effects arising from the Scheme to Blick Mead.*

*As such, towards the end of the Examination there have been numerous discussions in written and oral submissions as to the appropriate way that the impacts of the Scheme on Blick Mead can be monitored, and if necessary, mitigated during the construction and operational periods.*

*At ISH08 (summarised in [REP8-016]), the Applicant made clear its position that any effect on Blick Mead from the Scheme must be considered as part of consideration of groundwater effects generally, in particular the Groundwater Management Plan required by item MW-WAT10 of the OEMP. It went on to say that explicit reference to Blick Mead within the OEMP and the DCO was not required due to the fact that Blick Mead was a receptor within the GRA and that MW-WAT10 (as then drafted) provided for that GRA to be updated on the basis of the final design in any event.*

*To put the matter beyond doubt, at ISH10 [summarised in REP8-018], the Applicant proposed wording for MW-WAT10 to provide for the need for explicit reference to how Blick Mead had been considered to be included within the Groundwater Management Plan. The Plan submitted under MW-WAT10 would need to be approved by the Secretary of State and consulted upon with the EA and Wiltshire in its role both as LLFA and more generally in respect of heritage matters. This was reflected in the OEMP submitted at Deadline 8. 8.4.5.”*



<p>2.34</p>	<p>On July 31st 2020 The Blick Mead Project received new, internationally important, data that for the first time dates the soil sequence on its river terrace (see TerrACE report attached). The terrace is important because it links the spring and the edge of the known Mesolithic site, and its subsequent build up potentially tell us much about the way agricultural and cultural practices evolved from this time. The dating technique used was OSL (Murray and Wintle, 2000).</p> <p>The OSL results were accompanied by new DNA results from the Blick Mead spring which revealed that trace remains of 43 different plant species dating between c. 7500-4700 BC survive in an area protected (presently) by the water table. Both the OSL and DNA work was undertaken by Tromso University's TerrACE (ERC) Project with specialist support from the Blick Mead team. The TerrACE team is world renowned and comprises researchers from eight institutions and universities in five European nations.</p> <p><b>OSL results</b> -The results provide a detailed dating sequence of human occupation at Blick Mead from the later Mesolithic (hunter gatherer) period c. 4500 BC, through to the high medieval period (see attached TerrACE report) . The dated sequence, which starts with a preserved late Mesolithic land surface that overlays well- preserved auroch hoofprints under a laid-by-hand stone platform surface , potentially charts land use over several millennia at Blick Mead. This palimpsest is unique for the Stonehenge World Heritage site.</p>	<p>Although of great interest, the results of the OSL dating and DNA results do not change the principal facts that the Blick Mead site will not be physically impacted by the Scheme and there will not be any adverse effect on spring flows and the overall water regime at Blick Mead (see response at Point 2.33 above).</p> <p>The Secretary of State should note that similar ground conditions and conditions of preservation (waterlogged), as are contained within the Blick Mead site, have not been located or found within the Scheme boundary by the extensive and robust archaeological evaluations undertaken by the Applicant [REP1-039 to REP1-056] and approved by HMAG, including within large naturally formed solution hollows. However, should they exist, the Detailed Archaeological Mitigation Strategy (DAMS) is reflexive enough to respond to new discoveries and research (see below).</p> <p>With regard to the Heritage Impact Assessment, as stated by Historic England at ISH1 Cultural Heritage [REP4-030, items 4 (i), (ii) and (iii)]:</p> <p><i>“it was not possible to say whether, if the WHS were being considered for inscription now, Blick Mead would be included. Evidence would be required to demonstrate the relationship with other Mesolithic sites in the region. Mr Owen John noted that the inclusion of Blick Mead in the WHS would require re-nomination of the WHS. Mr Owen John confirmed that regardless of the significance of Blick Mead, it plays no part of 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 which Highways England has properly undertaken its assessment of Blick Mead as well as of the OUV on the whole.”</i></p>
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<p><b>The DNA results</b> are of huge significance due to the context of the antiquity of the plant remains surviving in the sediments in the Blick Mead spring (c. 9500-6700 years old) and what they tell us about the landscape at that time. The Mesolithic has long been seen as 'lost' period in the WHS (See Darvill 2006, 66) and was not in consideration when the WHS was first listed by reference to its Neolithic and Bronze Age heritage. The DNA shows that an environmental record from the Mesolithic is preserved, a great rarity nationally and a first for the WHS. This is very likely to be the case for the other time periods revealed by the OSL dating. We can thus reconstruct how this part of the WHS landscape developed from just after the end of the Ice Age through to the modern period. It may well be possible to extract similarly detailed information from those parts of the WHS that are scheduled for destruction if the scheme proceeds. However, the current HIA and DAMS are not adequate for the task.</p>	<p>The Applicant reiterates again that it has followed the appropriate guidance in undertaking its HIA (ICOMOS 2011) and the HIA Scoping Report was endorsed as appropriate by the ICOMOS Mission 2018. The HIA Scoping Report and its approach was approved by HMAG (including Historic England, Wiltshire Council, the National Trust and English Heritage). Historic England also noted that the HIA was thorough and broadly concurred with the assessment in the HIA in its application of the ICOMOS 2011 guidelines [TR010025-001972] and the overall assessment conclusions. In particular, Historic England stated in that submission (para 2.4.10):</p> <p>"We consider that the assessments conducted under the Scheme were sufficiently rigorous to inform determination of the Scheme and development of an appropriate and proportionate archaeological mitigation strategy. The recently published research does not change our view of those assessments."</p> <p>With regards to the adequacy of the DAMS [TR010025-001951], the DAMS and its Archaeological Research Agenda (ARA) provide mechanisms to ensure a flexible response to the archaeological resource that address relevant research questions. The approach of the DAMS is based on developing site-specific research questions and focusing site decision-making on addressing these. The DAMS provides ample scope to address discoveries during the mitigation programme, and to take account of emerging discoveries and theories within and in the vicinity of the WHS.</p> <p>Wiltshire Council and Historic England consider that the DAMS and its ARA provide an appropriate basis for development of site-specific research questions and SSWSIs. Historic England's closing submission [AS-111] confirms, "We believe that the dDCO, OEMP and DAMS set out a process to ensure that heritage advice and considerations can play an appropriate and important role in</p>
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		<p>the construction, operation and maintenance of the Scheme [...] we consider sufficient safeguards have been built in for the detailed design stage”.</p> <p>The Applicant further details the fitness for purpose of the DAMS in their Overarching Response addressing the ‘new discovery’ [TR010025-001981, section 5].</p>
2.35	<p>The state-of-the-art scientific techniques employed by the TerrACE team, in particular the method for extracting DNA from ancient sediments and the detailed OSL dating of the soil, sets a benchmark for alternate research strategies in the Stonehenge World Heritage Site. Such strategies would significantly add to our understanding of the WHS's OUV.</p> <p>Please find the interim report on the OSL and DNA results from Blick Mead by the TerrACE team annexed to these submissions. These are preliminary views provided in a short timescale for this consultation. However, the discovery of well-preserved, dated, and continuous environmental sequences at Blick Mead, including a preserved Mesolithic land surface, means that for the first time there is an opportunity to assess how human intervention adapted this part of the WHS landscape from just after the Ice Age through to the medieval period, and beyond.</p> <p>It is therefore absolutely critical that further archaeological work anywhere in the WHS should be conducted to the highest standards, and should employ the latest international scientific techniques, if</p>	<p>See response at Point 2.34 above regarding the reflexive and iterative approach built into the DAMS that allows it to take account of new research and discoveries.</p> <p>As stated at 1.2 in the DAMS “The Scheme passes through a landscape of high archaeological significance, both inside and outside the WHS. Accordingly, the intention of the Strategy is to apply the highest practicable standards of mitigation, employing innovative approaches to address a question-based research strategy that places the significance of the archaeological resource at the centre of decision-making both at design and implementation phases.” Using the highest standards and the latest scientific techniques are central to the delivery of the DAMS by the Applicant.</p> <p>With regards to the quality and adequacy of the archaeological evaluations undertaken so far by the Applicant, please see Point 2.23 above.</p> <p>With regards to 100% sampling, please see the Applicant’s response at Point 2.24 above.</p> <p>With regards to similar ground conditions and conditions of waterlogged preservation being located within the DCO boundary, as are found at Blick Mead, and the reflexive approach inbuilt into the DAMS, please see Point 2.34 above.</p>



<p>it is to enhance the OUV of the WHS as opposed to damaging it.</p> <p>Together with the discovery of the monumental array of Neolithic pits, this discovery underscores the importance of Highways England using all scientific techniques available. Others have highlighted that the discovery of the pits demonstrates that survey techniques used thus far are inadequate. The results at Blick Mead further emphasise what is potentially lost through the failure to use such techniques and to employ 100% sampling.</p> <p>In particular, the TerrACE team's new techniques for extracting DNA from ancient remains in waterlogged conditions needs to be adopted by Highways and other research teams operating in the WHS. For example, the pit circle detected by Gaffney et al has shafts to the east which will be waterlogged. DNA and OSL techniques would provide more eco facts and soil sequencing dates for this feature. Our understanding of the Wilsford Shaft, south west of Stonehenge, would benefit similarly.</p> <p>The latest scientific results from Blick Mead demonstrate that the survey techniques used in this part of the WHS by the Applicant were wholly inadequate. For example, the total areas sampled by the Applicant and its sub-contractors in the Countess area and the attendant side valley, which share the same river terrace as Blick Mead, were 3% and 4% respectively. In contrast 100% of the river terrace contexts at Blick Mead have been sampled.</p> <p>The Applicant's investigations at Countess lack both detail and dating of the soil sequences and therefore fail</p>	<p>Regarding the Wilsford Shaft and the impacts of the Scheme, this has already been discussed at the Examination – please see the Applicant's response at ISH1 Cultural Heritage [REP4-030, item 6 (v)] and the response to the CBA [REP8-013, para. 2.1.4].</p> <p>With regards to the claim by David Jacques that “the total areas sampled by the Applicant and its sub-contractors in the Countess area and the attendant side valley, which share the same river terrace as Blick Mead, were 3% and 4% respectively. In contrast 100% of the river terrace contexts at Blick Mead have been sampled”, this statement is incorrect. The Applicant has responded to this on several occasions previously. The Applicant expands on its points to its Comments on Written Representations [REP3013, para. 21.4.7] and our responses to the CBA [TR010025-001126, para. 13.1.7] and to the Consortium of Archaeologists [REP7-021, para. 40.1.2] below:</p> <p>“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 [trial trenching in previous iterations of the Scheme since 1990] to achieve an overall sample of up to 5% by area outside of the WHS and [between 5% and]10% by area within the WHS [noting that in</p>
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<p>to map relationships between known archaeological artefacts there. those close to Blick Mead. The difference in adopting a sampling strategy of 100% at Blick Mead and 3-4% on the Countess side, locations only separated by about two hundred metres, is stark. The Blick Mead results have so far revealed a preserved and long-lived Mesolithic occupation (c.8000-4000 BC), ancient DNA of a diverse variety of flora and fauna, a late Mesolithic tree-throw shelter and occupation surface, well-preserved aurochs' hoofprints, plus a tightly dated laid stone surface into the spring. Thanks to TerrACE, we now know there are also preserved post-Mesolithic soil sequences which potentially take the WHS narrative much further. The Countess area investigations by the Applicant are completely inadequate by comparison, yet are the basis for this area of the WHS being given a low archaeological value in the HIA.</p>	<p>the majority of areas within the WHS within the construction footprint for the Scheme the percentage sample was closer to the 10% mark], and taking into account the emerging results of academic research programmes undertaken over the last decade.”</p> <p>The trial trench evaluation area, within the WHS, in the footprint of the eastern portal and its approach road is close to 10% by area, not the 3% to 4% claimed by David Jacques.</p> <p>It should also be noted that if David Jacques has excavated 100% of the Blick Mead site then he has excavated it completely and removed all of the deposits, which is clearly not the case. The Applicant questions the soundness of this argument.</p> <p>With regards to the detail of the soil sequences and dating at Countess the Secretary of State is referred to the comprehensive archaeological evaluation report for the eastern portal and approach roads [REP1-047 and REP1-048].</p> <p>Regarding mapping the relationship between Blick Mead and the investigations at Countess Farm, the Applicant reiterates points discussed at ISH2 [REP4-030, items 4 (i), (ii) and (iii)] - :</p> <p>“...the Applicant... explained that the previous ground conditions are detailed in Preliminary Ground Investigation Report [APP-273, page 53, paragraph 4.2.28 and Table 5.2]. Paragraph 4.2.28 notes: "Soft, silty, occasionally sandy peat has been identified in Alluvium in the year 1965 boreholes referenced in the ground investigation report HAGDMS reference 17031. This report was prepared in 2000 to inform the proposed improvement works at Countess Roundabout at the time. The PSSR [Preliminary Sources Study Report] suggests that the peat would have been removed at the time of construction of the Amesbury bypass and</p>
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is supported by the absence of peat layers in the ground investigations carried out after year 1965". A series of test pits excavated in the early 2000s in relation to the previous A303 improvement scheme noted that alluvial deposits were generally not present, with the existing embankments formed on placed fill. It is therefore suggested that any Mesolithic material was likely to have been removed in full along with soft material in this area prior to construction of the existing A303/Countess Roundabout embankments. In relation to trenching north of the A303 in 2003, and the trial trenching undertaken earlier in 2018, Mr Moore explained that the results of the trial trenching are reported as part of the Archaeological Evaluation Report Eastern Portal [REP1-047]. The topography there indicates that the trenches sit at the top of the floodplain in a discrete and distinct topographical location, which is distinct from the Blick Mead deposits..."

The material that would have allowed the mapping of the relationship between the two areas (Countess Farm and Blick Mead) has therefore been removed by the construction of the Amesbury Bypass (existing A303) in the 1960s.

With regards to the regards to the relationship between Blick Mead and the footprint of the Scheme in the eastern portal approach road, this is set out clearly in the DAMS [TR010025-001951, para. 3.3.87] where it states that comparison between the Mesolithic artefactual material recovered from the north side of the current A303 and its contexts and with that of Blick Mead indicates that the two represent different depositional sequences: a chalkland colluvial sequence on the flood-plain edge north of the A303, contrasting with a valley alluvial sequence over sand and gravels at Blick Mead, with a vertical difference of 3.5m between the floodplain edge locations north of the A303 and Blick Mead in the valley south of the road.



		<p>With regard to the claim that the Applicant has placed a “low archaeological value in the HIA” for the eastern portal and approach roads, the Applicant has responded to this above at Point 2.16.</p>
<p>2.36</p>	<p>With the discovery of the massive Neolithic pit circle being so recent, and its significance only now beginning to be researched, the importance of other pit anomalies in the WHS (but not in the circle formation), thus far dismissed as unimportant by the Applicant, now needs to be completely reconsidered. Some of these pit anomalies will be destroyed without further exploration should the scheme proceed on the basis of the current HIA and DAMS.</p> <p>The Applicant needs to propose a detailed mitigation strategy for the deposits found in sites with similar characteristics to Blick Mead, namely water-logged sediments, such as in the Wilsford Shaft and other pit anomalies in the road-line. 100% recovery techniques are required for ultra-rare ancient DNA and for preserved faunal and floral remains. Detailed OSL dating of sequences is also required to maximise our understanding of the OUV of this unique landscape.</p>	<p>The Applicant refutes that it has “dismissed as unimportant” pit anomalies in the WHS. The significance of these features was considered in the ES [APP-044] and the HIA [APP-195] and following the publication of the 2020 SHLP Paper, are considered further in the ES and HIA Addenda [TR010025-001979 and TR010025-001980].</p> <p>The Applicant’s Overarching Response addressing the ‘new discovery’ [TR010025-001981, para 1.2.2 clearly states:</p> <p>“The evaluation successfully identified and investigated the large pit-like features within the Scheme boundary that are cited by Mr Garwood. The Applicant considers that the interpretation of these features as of natural origin (but containing cultural material) is sound, based on the evidence from the evaluations.”</p> <p>Section 2 of the Overarching Response [TR010025-001981], clearly sets out how the Applicant undertook the archaeological evaluation for the Scheme and how it identified these features within the DCO boundary.</p> <p>As stated in para. 6.2.2 of the Overarching Response [TR010025-001981]:</p> <p>“As far as any additional or wider interpretation that might be entertained in light of the recently published discovery, the interpretation as natural features does not preclude anthropogenic modification and the mitigation strategy for the Scheme allows flexibility to investigate and interpret such features further, taking account of the Durrington Walls discovery.”</p>



		<p>David Jacques is therefore incorrect to state that the Applicant has dismissed these features as unimportant.</p> <p>The “pit anomalies” or solution hollows will not be “destroyed without further exploration should the scheme proceed on the basis of the current HIA and DAMS”, they will either be preserved in situ within the DCO boundary or carefully archaeologically excavated and recorded as part of the archaeological mitigation works as set out in the DAMS [TR010025-001951].</p> <p>With regards to setting out a detailed mitigation strategy for deposits found within the DCO boundary with similar characteristics to Blick Mead (i.e. waterlogged) in the DAMS – see response above regarding the flexible and iterative strategy in the DAMS at Point 2.34.</p> <p>With regards to 100% sampling, see response at Point 2.24 above.</p> <p>With regards to OSL dating – this is already captured in the DAMS [TR010025-001951, para. 6.3.73] amongst a raft of other scientific dating techniques to be delivered through the implementation of the DAMS.</p>
2.37	<p>Other submissions have focussed on the siting of the Western Tunnel Portal. The results at Blick Mead reveal that the assertion that the Eastern Tunnel Portal is sited in one of the least sensitive areas of the WHS is categorically wrong. This is demonstrated by the preserved eco facts found in the Blick Mead spring, both flora and fauna, dating c. 7500-4700 BC, including preserved aurochs’ hoofprints (see slide four), and the TerrACE discovery of well-preserved plant DNA of Mesolithic date existing in the sediments</p>	<p>With regards to the claim by David Jacques that the Applicant has claimed that they have located the eastern tunnel portal in one of the least sensitive areas of the WHS and that this is categorically wrong, the Applicant points to its response above at Point 2.16.</p> <p>With regards to the conditions of preservation within the Blick Mead site in comparison to that within the DCO boundary, please see the Applicant’s response at Point 2.34 above.</p> <p>With regards to the preservation of lynchets within the Blick Mead site, these will not be impacted by the Scheme.</p>

	<p>of the spring. Further, the discovery of intensive lynchet formations in the Middle Bronze Age and late Roman periods at the site enables us to investigate lynchets and reconstruct a particular landscape's development for the first time. For example, the latter may relate to changes in the late Roman/early Anglo Saxon agricultural practices in the WHS which at present tend to be understood theoretically due to the paucity of evidence. The paucity of sampling around the Eastern Tunnel Portal means that it cannot be concluded that that area of the WHS does not contain similarly significant material.</p>	<p>Regarding the quality and adequacy of the archaeological evaluations at the eastern portal and its approach roads, see the Applicant's response above at Point 2.23.</p> <p>The Applicant has assessed the results of the 2020 SHLP Paper at face value in its ES and HIA Addenda [TR010025-001979 and TR010025-001980] submitted to the Secretary of State on 13<sup>th</sup> August, including the impacts of the eastern portal and approach road upon the 'new discoveries'. The Addenda conclude that there were no new Likely Significant Effects and No Change to the overall conclusion of the HIA and the impact from the Scheme on the OUV of the WHS as a whole following the publication of the paper.</p>
2.38	<p>Finally, the new results emphasise the sensitivity of Blick Mead and the importance of the water table. This underscores the submissions we have previously made as to the impact of the tunnel on this water table and the potential for an extraordinary resource to be irreparably damaged.</p>	<p>Please see the Applicant's response above at Point 2.33 that addresses the same point.</p>



### 3 Cycling UK

	Matter Raised	Highways England's Response
3.1	<p>The discovery of an unprecedented partial ring of substantial monumental Neolithic pits, apparently centred around Durrington Walls henge, increases the significance of Durrington Walls and Woodhenge in the public imagination. This makes it more likely that members of the public will want to visit the vicinity of both Stonehenge and Woodhenge. This in turn highlights the harm to the public interest, caused by the proposed prohibition of cyclists from the A303 between the two roundabouts, failure to provide tracks for cyclists and other non-motorised users (NMUs) along the existing A303 alignment between Stonehenge Bottom and Countess Roundabout, and reliance on poor or no cycle provision on existing non-trunk roads into and out of Amesbury as a substitute for the current right to ride on the Amesbury Bypass. As stated below, a cycle journey from Stonehenge Bottom to Woodhenge would take an estimated 36 minutes via Church Street (in Amesbury), instead of 13 minutes via the A303 (source: Google Maps).</p>	<p>The Scheme will provide an extensive network of routes available to cyclists including 10 miles of surfaced restricted byways and bridleways from which motorised vehicles are excluded. This network includes a good alternative route to the tunnel for cyclists along the existing A303 with connections to Amesbury via National Cycle Network Route 45 and a new bridleway to Winterbourne Stoke.</p> <p>An independent check of estimated journey times from Stonehenge Bottom to Woodhenge on a bicycle indicates the following (source: Google Maps):</p> <ul style="list-style-type: none"> <li>• Via A303, Countess Roundabout and A345 – 15 minutes (2.6 miles)</li> <li>• Via Stonehenge Road, Church Street, Amesbury town centre and A345 –</li> <li>• 21 minutes (3.3 miles)</li> </ul> <p>The slight difference between the 13 minute journey via Countess identified by Cycling UK and the 15 minute journey above may be explained by slightly different start and end points used in the map tool. Stonehenge Road is identified on Google Maps as a one-way road south of the A303. The 36 minutes for the journey via Church Street quoted by Cycling UK is likely to be influenced by an assumption in the algorithm that a cyclist would need to dismount and walk along Stonehenge Road.</p> <p>A difference in 6 minutes between the journey via Countess at present and the journey via Amesbury town centre after the tunnel</p>



		<p>is open cannot be considered to cause significant detriment in the context of a leisure journey for which the nearest start points are likely to be at the Stonehenge Visitor Centre (2.2 miles west of Stonehenge Bottom) or Winterbourne Stoke (3.4 miles west of Stonehenge Bottom). These trips are estimated to take 11 minutes (via Byway 12) and 18 minutes by cycle respectively.</p>
3.2	<p>Provision for cyclists, cyclist safety and the promotion of cycling are established public policy and stated to be Highways England policies. This is congruent with public policies to reduce air pollution and greenhouse gases, and to promote public and personal health and reduce illness.</p>	<p>An objective of the Scheme is to create legacy benefits for non-motorised users in accordance with Highways England’s Strategic Business Plan and Cycling Strategy which are aligned with Government policy to encourage walking, cycling &amp; horse-riding through national and local policies and plans. As noted above, the Scheme will provide an extensive network of routes available to cyclists and other non-motorised users</p>
3.3	<p>There is independent evidence, and some Highways England evidence, that pedal cyclists are frequent and regular users of the A303 throughout the Scheme area and elsewhere. Highways England evidence on this is sparse, unreliable and inadequate. In particular, cycles have not been counted at times of day or week when they probably use the A303 in significant volumes.</p>	<p>The traffic survey data collected for the Scheme indicate low levels of cycle use on the A303 between Amesbury and Berwick Down and on adjacent sections, but higher levels on adjacent east-west routes such as A36 and The Packway.</p> <p>For the three manual traffic count sites around Stonehenge (Longbarrow, Stonehenge Road and Countess), there is 12 hours of data (07:00 to 19:00) for one neutral month day and 9 hours of data (10:00 to 19:00) on three separate summer days. These surveys show a maximum of 7 cycles recorded during the time periods on two of the days at Stonehenge Road, whilst most of the readings recorded between zero and three cyclists during the time period.</p> <p>Contrary to Cycling UK’s claims elsewhere in their submission, STRAVA heat maps indicate very low levels of cycle use on the A303 when compared with parallel east-west routes such as the A36 to the south and the Packway to the north. The STRAVA heat</p>



maps illustrate use by cyclists (using STRAVA) on the network in the vicinity of Stonehenge relative to similar use traces on the A303. Whilst it is not possible to extract the numbers of cyclists contributing to the STRAVA heat maps, it is clear that the heat traces suggest routes other than the A303 are used more predominantly. The 'significant' use of the A303 by cyclists is therefore refuted.

The Scheme will provide an extensive 10-mile network of paths designed for cycle use linked to adjacent local roads and byways. As part of this network, the existing A303 between Longbarrow and Stonehenge Road will be closed to traffic and available for use by cyclists.

From a separate data source, longer duration link counts have been recorded on the A303 at three sites (east of A36 junction (which is west of Stonehenge), west of Countess and east of Solstice Park) for three neutral month days and one summer month day. The neutral month data covers a 24-hour period and the summer month data covers a 14-hour period (06:00 to 20:00). The A36 and Solstice Park counts only identified one cyclist each during the all the surveys, which was on a neutral day. The Countess survey only counted 7 cyclists, all on the summer day.

3.4 There needs to be continuous cycle provision both on and in the alignment of the proposed A303 through the scheme. The main proposed off-road NMU route would not provide this, as it will lie only between the Longbarrow Roundabout area and existing junction with Stonehenge Road, Amesbury. Between Stonehenge Road and Solstice Park, the proposed "provision" consists of existing local roads through Amesbury, which are not Highways England's provision or responsibility, are unsuitable in

It is Highways England and Sustrans' policy to separate cyclists and motorists on new trunk roads.

Cyclists will be able to travel between the western and eastern extents of the scheme along surfaced public rights of way, including public highway.

As set out on page 14-4 of Highways England's response to Relevant Representations [AS-026], there are limited opportunities to enhance the NMU provision within Amesbury due to limited road space or other available corridors. The new public rights of



	<p>some places and form no part of the Amesbury Bypass. The lack of provision is contrary to public policy and should not be allowed to prevail.</p>	<p>way proposals around Amesbury are appropriately designed to accommodate and enhance the existing network. As set out in paragraph 7.1.34 of Highways England's Response to Written Representations [REP3-013], improvements to local roads and the A435 around Amesbury and the Countess Roundabout are outside the scope of the Scheme. Through its Benefits Steering Group, Highways England is supporting 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.</p>
<p>3.5</p>	<p>Pedal cycle users are a diverse category of road users, with a variety of needs, levels of experience, attitudes to risk and travel purposes. Hence there need to be three layers of provision for cycling, along the A303 alignment through the scheme.</p> <p>i) The off-road NMU provision is important in itself, even though it has drawbacks such as shared use with walkers and horse-riders, and a proposed lack of night lighting. It needs to continue east-west between the point where it runs north-south and is diverted, connecting with Stonehenge Road, Amesbury. This provision would be in the form of roadside cycle tracks next to both carriageways, between the tunnels and Countess Roundabout. This is likely to require, among other things, a greater land-take than is currently proposed.</p>	<p>The Scheme will provide a quality public right of way along the route of the existing A303, retaining existing connections with other parts of the highway and public rights of way network; however, these proposals are also mindful of the Scheme's World Heritage Site (WHS) context and seek to limit the amount of 'new' movements within the WHS as much as possible. No lighting is proposed on this route given that WHS context.</p>
<p>3.6</p>	<p>ii) Cyclists who are prepared to use the existing single and dual carriageways of the A303 require permission to use the proposed tunnels, which are two-lane in each direction.</p>	<p>The design standard [CD 352 – <i>Design of road tunnels</i>] that governs the design, construction, operation and renewals of road tunnels over 150 m long provide that pedestrians, pedal cycles, motor cycles with engines less than 50cc, animals and animal</p>



	<p>This is a wholly exceptional situation, and Highways England has made no coherent or valid site-specific safety case against it. Safety for cyclists on the carriageway is likely to be at least as good as it is on other A303 dual carriageways, where cycling is permitted. There are methods of further improving cycling safety and mitigating possible effects on traffic flows.</p>	<p>drawn vehicles, and mobility scooters shall not be permitted to use them. This has informed the restrictions set out in the Development Consent Order and use of the A303 tunnel by cyclists will not be permitted. It is noted, in any event, that a reasonable alternative is provided along the proposed restricted byway on the route of the existing A303.</p> <p>There are no tunnels operated by Highways England where cyclists are permitted.</p>
3.7	<p>iii) For cyclists who need or wish to use the tunnel, but prefer, or are unprepared, to use the carriageway, there should be provision for them to use the strips currently referred to as emergency walkways. These are wide enough for useable provision, even though it they are technically sub-standard for that purpose, like many other cycle facilities in England.</p>	<p>The design standards that govern the design, construction, operation and renewals of road tunnels over 150 m long requires the provision and maintenance of a low-level verge for emergency use by vehicle occupants and to maintain the design sight-lines on bends. The emergency walkways are an important feature to support the safe operation of the tunnel. In the event of a vehicle breakdown or incident in the tunnel, the walkways provide an area off the carriageway for road users to access the emergency roadside telephones; use of the walkway by cyclists could block the means of escape for vehicular users. Notwithstanding the above, if cyclists were to use the walkway, there would be insufficient safe passing room. This could lead to cycles blocking an escape route and accidents between cyclists and those leaving their vehicles following an incident, which could also lead to either party being knocked into the carriageway.</p> <p>Cycling UK's own guidance states that physical segregation is required for fast road routes.</p>
3.8	<p>In the traffic data there is evidence of significant cycle use in the Bulford area. The A303 causes community severance between Amesbury to the south and Bulford, Bulford Camp and Tidworth to the North. The stopping up</p>	<p>This point was raised and discussed during the Examination of the application for a Development Consent Order. Please see the written summaries of Highways England's oral submissions given at the Issue Specific Hearing (6) on Traffic and Transport held on</p>



	<p>of the A303 crossing at Amesbury Road, which is partly a lane or byway, worsens this severance. The opportunity should be taken to provide a “green bridge” for non-motorised users, likely to be more heavily used for everyday travel than those already proposed to the West.</p>	<p>13 June 2019 [REP4-034], and Highways England's responses to the Examining Authority's First Written questions 1.34 to 1.36 [REP2-036]. These submissions explain the reasons why, although additional provision for non-motorised users in this area was considered, it was not included within the Scheme.</p> <p>It is also noted that as part of Highways England's commitment to walkers and cyclists, a partnership project has been funded with Wiltshire Council to upgrade a missing section of National Cycle Network Route 45 over the Solstice Park Junction to improve connectivity between Amesbury and Bulford. This opened in March 2020.</p>
3.9	<p>Due to the absent and inadequate provision for cyclists as road users, the CPO should not be approved nor should Development Consent be granted, without modification.</p>	<p>The A303 Amesbury to Berwick Down Scheme will provide an extensive network of routes dedicated to cyclists and other non-motorised users. Cyclists will be able to use the A303 west of Longbarrow junction and east of Countess junction. Highways England will provide a reasonably convenient alternative route between these two points using the route of the former A303 and local roads. It is therefore not agreed that there is inadequate provision for cyclists as road users within the Scheme, including those cyclists travelling between Stonehenge and Woodhenge.</p> <p>As such, and given that there was due consideration of NMU provision during the preparation and examination of the DCO application, it is also not agreed that the submissions made by Cycling UK now, almost a year after the close of the examination, should lead to the modification of either the Scheme or the DCO, should the DCO be made by the Secretary of State in due course.</p>
3.10	<p>Unfortunately, in the case of the present Scheme, Highways England's approach has been to treat pedal cycle users as an essentially “off-road” category, to be give</p>	<p>The Scheme approach has been to ensure a safe route for cyclists, which enables connectivity and ensures there is no</p>



	<p>provision alongside pedestrians, horse-riders and trail-riding motorcyclists. This approach fails to treat cyclists as road users, with the right to use the carriageway. One suspects that such use has been treated as negligible, but it is in fact significant.</p>	<p>severance, whilst safely segregating cyclists from high speed motor vehicles.</p> <p>Cyclists are only taken on an 'off-road' route to account for the route of the tunnel, their use of which is prohibited – all other cycling provision is either on, or adjacent to, roads.</p>
3.11	<p>Going forward, it is Highways England's stated intention to convert the A303 into an "Expressway". This type of road is motorway-style, and cycling is expected to be prohibited. If this vision does in fact go ahead, there will be an obligation to provide continuous on-line or adjacent alternative provision. It would be the worst possible precedent for the Scheme, as the first truly "Expresswayready" scheme on the A303, to make no valid, or inadequate, provision for cycling along the A303 corridor. Such an omission is unacceptable.</p>	<p>Within the application, Highways England has made provision for cyclists to travel safely and conveniently between the western and eastern extents of the Scheme; predominantly on or adjacent to public highway; with off-road provision where cyclists are prohibited (i.e. within the tunnel). There is no 'omission' to provide cycling facilities within the Scheme, irrespective of whether it comprises a trunk road or an 'expressway'.</p>
3.12	<p>It is exceptional for an A-road to prohibit cycling. There are only two other instances in the South West, and the counties adjacent to Wiltshire:</p> <ul style="list-style-type: none"> <li>The A38 Saltash Tunnel. This is an older 20th century two-way single carriageway tunnel with very narrow pedestrian sidewalks. There is an alternative route on B3271 North Road.</li> </ul> <p>Short sections of the A4142 Eastern Bypass Road, Oxford. There is continuous high-quality adjacent and parallel cycling provision, including to the prohibited and permitted sections.</p>	<p>It is Highways England's policy to separate cyclists and motorists on new trunk roads. Cycles are not allowed through trunk road tunnels in the UK, including at Dartford, A3 Hindhead, A38 Saltash and A19 Tyne Tunnel.</p> <p>The Oxford Eastern Bypass has no tunnel sections and cyclists aren't prevented from using the dual carriageway. In both examples provided by Cycling UK the segregated cycle provision uses local roads for part of the route, as is proposed for the Scheme.</p>



3.13	<p>Although not conducted for the purpose, the Manual Classified Traffic Counts (MCTC) done in 2018 for the Scheme did capture instances of cycling on the A303. There were inconsistencies, where cycles counted at one location had “disappeared” at adjacent junctions. See Appendix A.</p>	<p>Cyclists are able to join or leave the A303 at the various junctions/byways – there is no reason why numbers of cyclists should be identical at the start and end of a link which is subject to a count (generally a 'link' will comprise a section of road between junctions).</p> <p>For example, Byway 12 is a significant north / south track to the west of Stonehenge that would potentially explain the difference in cycle numbers between Stonehenge Road and Longbarrow. This is illustrated in the STRAVA heat map at Figures 1 and 2 below.</p> <p>The survey data collected shows low use of the A303 currently by cyclists and a review of STRAVA heat maps supports this.</p>
3.14	<p>The counts were carried out between 12 noon and 6pm for the Summer (August) day and 07:00 to 19:00 for the Neutral (October) day. Informants in local cycling clubs and cycle shops have told me that most cyclists using the A303 for discretionary purposes (e.g. fitness) choose to cycle in the early morning or the evening. Therefore the MCTC counts have been timed to omit this significant category of cycle flows.</p>	<p>In accordance with Department for Transport guidance, traffic counts are timed to cover periods when a route is relatively busy with vehicular traffic, as this governs the capacity to be provided.</p> <p>The manual classified traffic counts were used to construct the traffic models and they were the hours chosen to allow the models to represent the network at its busiest in relation to traffic delays.</p>
3.15	<p>The Automatic Traffic Counts combined statistics for cyclists and motorcyclists into one category, and of course the number plate recognition surveys excluded cycles, which have none.</p>	<p>The purpose of the automatic traffic counts was to determine hourly flow profiles across the day and also across each day of the week that was surveyed. This was done to ensure that the Manual Classified Turning Counts provide representative data for the traffic models for the Scheme.</p> <p>The survey data collected shows low use of the A303 currently by cyclists and a review of STRAVA heat maps supports this.</p>



3.16	<p>STRAVA is an online application that is popular with cyclists, runners and water sportspeople. It uses smartphone and other GPS device data to allow individuals to record their routes and measure their times and speeds. It also aggregates this data to provide a “Global Heat Map” that shows the relative volumes of cyclists (or runners or both) across an area they have used. The brightness of the tracks is proportional to the volume of users. A limitation is that this is a relative, not absolute or quantitative, measure. The map can be viewed interactively, and a cyclists-only mode is available, as used here. The worldwide but zoomable map is freely available online. The higher zoom levels are available to those who register a free account on the site. See <a href="https://www.strava.com/heatmap">https://www.strava.com/heatmap</a>.</p>	Noted.
3.17	<p>The following HeatMap screenshots show cycling activity on the A303 in the Scheme area. It is clear that there is significant cycling activity on the A303 trunk road.</p>	<p>The STRAVA heat map indicates very low levels of cycle use on the A303 when compared with parallel east-west routes such as the A36 to the south and The Packway to the north.</p> <p>The heat maps illustrate extensive use of the network in the vicinity of Stonehenge and the A303 by cyclists using STRAVA. Whilst it is not possible to extract the numbers of cyclists contributing to the STRAVA heat maps, it is clear that the heat traces suggest routes other than the A303 are used more predominantly. The ‘significant’ use of the A303 by cyclists is therefore refuted.</p> <p>STRAVA heat maps were accessed on 26 August 2020 to review the extent of activities being tracked by STRAVA users using the local road and public right of way networks (please refer to Figures 1-3 below). A general view of Stonehenge and the wider area (as extracted from STRAVA heat maps) is provided in Figure 1 below,</p>

with a nearer area view in Figure 2. In both cases, only cycling activities are selected.

In both Figures 1 and 2, the heat traces illustrate clear use of particular routes and the following observations about the route choices of users can be made:

- The A303 corridor appears dark, indicating lower use by cyclists; other routes show greater 'heat,' suggesting alternative routes are significantly favoured by cyclists;
- The Packway (Larkhill) - Tidworth Road link is a dominant east-west route north of the A303 and Stonehenge;
- The A36 and Church Bottom is a dominant east-west route south of the A303 and Stonehenge.
- Use of the two unclassified roads south of Amesbury, to the west of the A345, for north-south movements;
- The staggered movements across the A303 can be determined between Stonehenge Road and the permissive route immediately north of the Stonehenge site (Figures 2 and 3). This movement requires users to travel along the A303 for a short distance and cross oncoming traffic. The traces are brighter on the southern side of the A303, suggesting use of the pavement adjacent to the carriageway at this location.

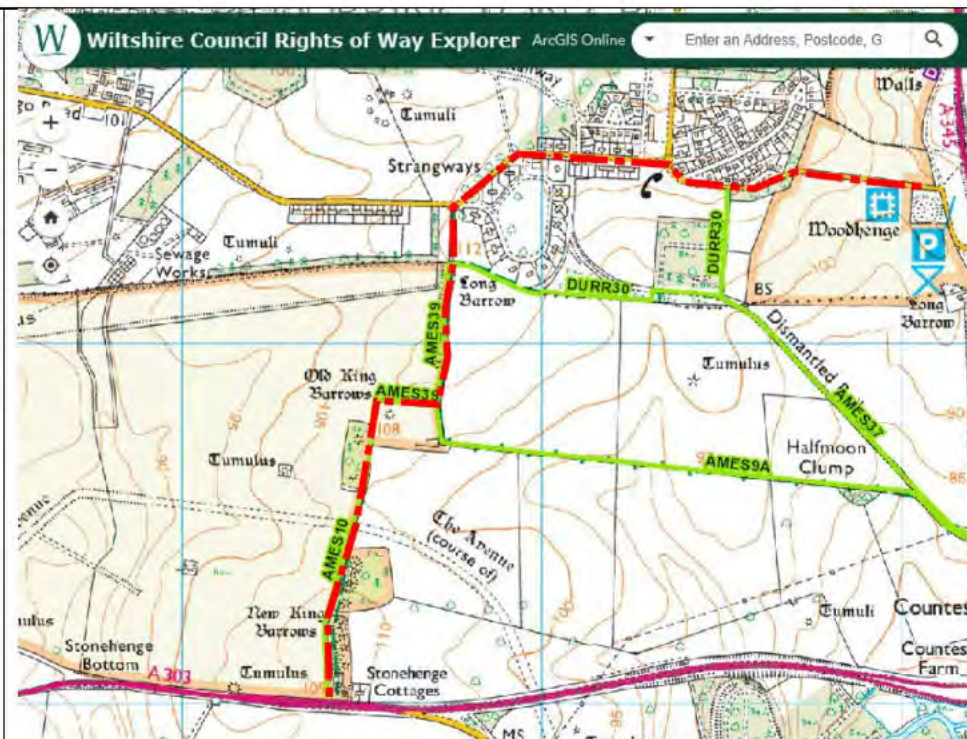
Figure 3 illustrates use of Stonehenge Road, Church Street and Countess Road by cyclists, with the white heat in marked contrast to the A303. The use of minor road and off-road route north of the A303 linking the Stonehenge site with Countess Road suggests cyclists are actively avoiding using the A303.



		<p>The Scheme proposals will facilitate use of local roads and public right of way networks to travel from west to east and will not prevent the passage of cyclists between Stonehenge Bottom and Woodhenge and Durrington.</p>
<p>3.18</p>	<p>The alternative route for cyclists, via Stonehenge Road and Amesbury town centre, is unsuitable in its conditions and its location. It uses roads such as London Road, where cycling conditions are so poor that Sustrans left a gap in National Cycle Route 45 rather than endorse the use of this road. A cycle journey from Stonehenge Bottom to Woodhenge would take an estimated 36 minutes via Church Street, instead of 13 minutes via A303 (source: Google Maps).</p>	<p>As noted above, the extra journey time incurred by cyclists not being able to use the A303 between Stonehenge Road and Countess is estimated to be 6 minutes if they travel via Stonehenge Road and Amesbury town centre, assuming Countess is the destination. As also explained above, given that Stonehenge Bottom is unlikely to be the start or end of a cycle trip, this 6 minute increase in journey time is not considered to be materially significant in the context of a longer journey, and, in the absence of the existing heavily trafficked A303, there will be an enhanced experience for cyclists (and other non-motorised users) when passing through the World Heritage Site. There will be no increase in the time journeys take via Countess from other directions.</p> <p>Sustrans' map of the National Cycle Network indicates National Cycle Route 45 as an on-road route between the Stonehenge Road / Woodford Road junction and B&amp;M Homestore on London Road, at which point the off-road route continues in an easterly direction towards Bulford via the Solstice Park junction. (<a href="http://www.sustrans.org.uk/find-a-route-on-the-national-cycle-network/route-45/">www.sustrans.org.uk/find-a-route-on-the-national-cycle-network/route-45/</a>),</p> <p>An independent check of estimated journey times from Stonehenge Bottom to Woodhenge on a cycle indicates the following (source: Google Maps):</p> <ul style="list-style-type: none"> <li>• Via A303, Countess Roundabout and A345 – 15 minutes (2.6 miles)</li> </ul>

		<ul style="list-style-type: none"><li>• Via Stonehenge Road, Amesbury town centre and A345 - 21 minutes (3.3 miles)</li></ul> <p>There is also a route between Stonehenge Bottom and Woodhenge via bridleways AMES10, AMES39 and optionally part of DURR30. Although this route doesn't have a bound surface, it is accessible to most cycles except those with very narrow road tyres. This 3.6 mile route would also take 21 minutes, according to Google Maps. This is shorter than the route via Amesbury and is shown in red below. Although it doesn't have a bound surface, it would be accessible to all cycles except possibly those with very narrow road tyres.</p> <p>Cycling UK's recently published King Alfred's Way also uses the adjacent and similar sections of bridleways DURR30 and AMES37 past Woodhenge, indicating their suitability for use by cyclists.</p>
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(Source: Wiltshire Council's online rights of way map)

Cyclists will therefore be able to make a journey between the various historic sites and will not be required to travel through Amesbury.

3.19

Sustrans, the National Cycle Network provider, provided recent maps from their review of the network. These classify London Road, High Street, Salisbury Street, The Centre, Porton Road and the London Road-Porton Road roundabout as "VERY POOR" on their scoring system.

As set out on page 14-4 of Highways England's response to Relevant Representations [AS-026], there are limited opportunities to enhance the NMU provision within Amesbury due to limited road space or other available corridors. The new public rights of



		<p>way proposals around Amesbury are appropriately designed to accommodate and enhance the existing network.</p> <p>As set out in paragraph 7.1.34 of Highways England's Response to Written Representations [REP3-013], improvements to local roads and the A435 around Amesbury and the Countess Roundabout are outside the scope of the Scheme. Through its Benefits Steering Group Highways England is supporting 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.</p>
3.20	<p>Following an oral representation I made to the Panel of the Examination in Public, the then Panel Chair and members asked me for information about tunnels in Norway and the USA, where there is a safety system to alert motorists to the presence of cyclists in tunnels. The following images show examples of such systems. They are largely self-explanatory. With the “smart road” signage in the proposed A303 Scheme, such a system is clearly feasible. Automatic detection of pedal cycles is a technology that is now as well established as automatic number plate recognition. Safety is after all the Promoter’s first priority.</p>	<p>As explained above, the design standards that govern the design, construction, operation and renewals of road tunnels longer than 150 metres in the UK provide that pedestrians, pedal cycles, motor cycles with engines less than 50cc, animals and animal drawn vehicles, and mobility scooters are not be permitted to use the tunnel. These design standards have informed the restrictions set out in the Development Consent Order and use of the A303 tunnel by cyclists will not be permitted. To support enhanced safety for both vehicular users and vulnerable user groups such as cyclists, the strategy for the A303 tunnel has been to align with the national standards and to provide alternate segregated facilities that connect in with National Cycle Route 45 at the eastern end of the Scheme.</p>
3.21	<p>To illustrate that the A303, a trunk road, is in active use by the cycling community, here is a list of Time Trial courses elsewhere on the A303. Time trialling is a very popular form of bicycle competition, originating in Britain and with a strong UK tradition. Riders set off at typically one minute intervals, along a measured course e.g. 10, 25 or 30 miles, but as short as 5 miles or as long as 24 hours, riding against the clock. Modern ‘TT’ courses are often on dual</p>	<p>Although cyclists will be excluded from the section of the A303 between Longbarrow and Countess, the Scheme does not restrict cycle use on other identified sections of the A303. It is noted that it is not a Scheme objective, or within Highways England's cycling strategy, to provide facilities to cater for a very specific form of cycling such as time trials.</p>



	<p>carriageways, as they are straight, fast and well surfaced. An event may consist of several laps, with a turn at a roundabout or intersection. The normal time of the week is very early on a Sunday morning, to minimise traffic. The proposed 'improved' A303, with its tunnels, would make an excellent short time trial course. Cycling Time Trials (CTT) is the National Governing Body for time trials in England, Scotland and Wales. See <a href="https://www.cyclingtimetrials.org.uk/articles/view/7">https://www.cyclingtimetrials.org.uk/articles/view/7</a> for more about CTT.</p> <p><b>Partly dual carriageway, west of Stonehenge:</b>  U30/10 Podimore - Ilchester Bypass - Tintinhull  <a href="https://www.cyclingtimetrials.org.uk/course-details/u30-10">https://www.cyclingtimetrials.org.uk/course-details/u30-10</a>  U30/25  Podimore - Ilchester Bypass - South Petherton  <a href="https://www.cyclingtimetrials.org.uk/course-details/u30-25">https://www.cyclingtimetrials.org.uk/course-details/u30-25</a>  U30/25R Podimore - Ilchester Bypass - South Petherton  <a href="https://www.cyclingtimetrials.org.uk/course-details/u30-25r">https://www.cyclingtimetrials.org.uk/course-details/u30-25r</a></p> <p><b>Mainly dual carriageway, east of Stonehenge:</b>  P612/10 A303-A34 intersection – Picket Twenty (nr Andover) <a href="https://www.cyclingtimetrials.org.uk/course-details/p612-10">https://www.cyclingtimetrials.org.uk/course-details/p612-10</a>  P612-25 A303-A30-M3 intersection – Andover Bypass  <a href="https://www.cyclingtimetrials.org.uk/course-details/p612-25">https://www.cyclingtimetrials.org.uk/course-details/p612-25</a>  P612-30 A303-A30-M3 intersection – Andover Bypass  <a href="https://www.cyclingtimetrials.org.uk/course-details/p612-30">https://www.cyclingtimetrials.org.uk/course-details/p612-30</a></p>	
3.22	<p>There is nothing specifically inherent to a road tunnel that makes it dangerous for cycling, or for pedal cycles to share road space with motor vehicles. Here are some examples of tunnels and other structures where cycling takes place either integrated with traffic, alongside it, or integrated with walking.</p>	<p>The significant contrast in speed between motor vehicles (including HGVs) and pedal cycles, within a tunnel environment with a 70 mph speed limit would give rise to hazardous scenarios. Due to the constrained space available within a tunnel, it is important to maintain a smooth and predictable driving experience</p>



	<p><b>Euston Road Underpass, London</b> has Eastbound and Westbound carriageways of two lanes each. It is busy day and night, with tens of thousands of vehicles daily. It has steep ramps down and up, and vertical sidewalls, with no walkways or emergency access facilities. Here, many cyclists and motor cyclists share the road with general traffic including HGVs. The left side of the left lane is popular with cyclists, but so is the gap between the left and right lanes, because it tends to be wider and enables riders to make progress more efficiently.</p> <p><b>M48 Severn Bridge</b>, a Highways England structure, is the older of two motorway bridges between England and South Wales. The emergency access lanes have been opened for walking and cycling. It is a very popular route and has become a destination in itself, receiving events such as the weekly Chepstow Parkrun, visits by groups of touring cyclists on weekends, and mass sponsored bike rides.</p> <p><b>The Bath Two Tunnels Greenway</b> is part of the National Cycle Route Network and runs through two (1/4 mile and 1 mile) tunnels, each built for a single-track railway line and hence low and narrow. Fears and predictions before construction, that potential users would be frightened to enter relatively dark and confined spaces, proved unfounded and the Greenway hosts over a million users a year.</p>	<p>through the tunnel. Accordingly, the UK road tunnel standards for tunnels longer than 150 metres prohibit the use of pedal cycles along with other vulnerable road user groups. In recognition of this, the Scheme includes alternative high-quality public rights of way that support the safe movement of non-motorised users through a network of new restricted byways and bridleways. These high-quality facilities provide connectivity across the Scheme and also importantly link into the existing byway network, which connects into the wider unique landscape in the area.</p> <p>The examples, cited by Cycling UK, of "tunnels and other structures where cycling takes place either integrated with traffic, alongside it, or integrated with walking", are not directly comparable to the tunnel included in the A303 Scheme and should therefore be distinguished from it on the basis that they are either established/historical, less than 150 metres in length and involve slower traffic speeds (Euston), or are not associated with roads (Bath), or in the case of the Severn Bridge, not a tunnel. None of these examples, either individually or collectively, adequately make the case for the permitted use of the proposed A303 tunnel by cyclists.</p>
3.23	<p>Although WebTAG guidance dating from the 1980s or before advises that cycling is to be prohibited in road tunnels, it provides no rationale or evidence base for this dated policy, which has been rendered obsolete by modern 'smart highway' technology.</p>	<p>WebTAG, now defined as TAG by the Department for Transport, is continually updated and provides information and guidance on the role of transport modelling and appraisal, and on how the transport appraisal process supports the development of investment decisions to support a business case. TAG does not set out design standards as suggested in Cycling UK's response. The relevant design standard [CD352 - <i>Design of road</i></p>



	<p>Other recent, current and forthcoming pro-cycling/climate/health government policies also render this blanket guidance obsolete.</p> <p>Other recent, current and forthcoming pro-cycling/climate/health government policies also render this blanket guidance obsolete.</p>	<p>tunnels] (formerly BD 78/99 (HE, 2020); Design manual for roads and bridges (DMRB) 2.2.9) was published in March 2020. This governs the design, construction, operation and renewals of road tunnels over 150 m long and provides that pedal cycles and other slower vehicles shall not be permitted to use them.</p>
3.24	<p><b>Exceptionality of the proposed A303 tunnels</b> WebTAG guidance provides that cycling may be permitted in “wholly exceptional” cases. This is such a wholly exceptional case for a number of reasons.</p> <p>The very high cost/investment in the scheme means that equity demands significant benefit to cyclists, not just detriment.</p> <p>This is a World Heritage Site &amp; tourism centre</p> <ul style="list-style-type: none"> <li>i) Compensation for losing the view</li> <li>ii) High visitor demand</li> <li>iii) Access to monument</li> <li>iv) Replaces existing well-used road on same alignment</li> <li>v) Close to settlements, communities</li> </ul>	<p>The A303 Scheme would provide long lengths of byway parallel to the proposed A303 route and the A360. The proposed restricted byway along the route of the existing A303 maintains the view of Stonehenge and the surrounding landscape of the World Heritage Site for NMUs, caters for high NMU visitor demand, provides access to the monument and links Amesbury with Winterbourne Stoke and the byway network at Byways 11 and 12. The routes along the A360 provide links to the Stonehenge Visitor Centre and the wider byway network. Together these routes provide significant benefits to cyclists and other non-motorised users. It is therefore not considered that the provision of a cycling route through the proposed tunnel would satisfy the “wholly exceptional” test.</p>
3.25	<p>There are exceptional tunnel conditions: extremely wide walkways, low flow/capacity ratios.</p> <p>There is a high time/effort/safety/convenience cost involved in cyclist use of the alternatives.</p>	<p>The size of a tunnel bore is driven by many design features such as number of traffic lanes and space needed for tunnel systems such as ventilation and traffic control devices. The number of lanes and width of emergency walkways makes A303 broadly similar to Hindhead. Given the high-speed environment and length of tunnel, Hindhead also prohibits cyclists and other user groups, in order to support the safe operation of the tunnel.</p>



	<p>. This is a different design from the Hindhead, Stockbridge, Saltash and other more typical Highways England tunnels – it has the widest bore by a significant margin.</p> <p>. At this time Highways England has access to smart signage and sensors that can automatically detect the presence of cyclists and has the opportunity to warn drivers of their presence in real time, to make for safety. There is a high degree of wasted value involved if cycling is prohibited: the potential of the designed wide access walkways and smart technology would be wasted if not adapted for cycling in the tunnels.</p>	<p>The UK design standards that govern the design, construction, operation and renewal of road tunnels over 150 m long require the provision and maintenance of a low-level verge for emergency use by vehicle occupants and to maintain the design sightlines on bends.</p> <p>The emergency walkways are an important feature to support the safe operation of the tunnel. In the event of a vehicle breakdown or incident in the tunnel, the walkways provide an area off the carriageway for road users to access the emergency roadside telephones.</p> <p>If cyclists were to use the walkway, there would be insufficient safe passing room, potentially leading to accidents between cyclists and pedestrians, which could also lead to either party being knocked into the carriageway.</p> <p>Cycling UK’s own guidance states that physical segregation is required for fast road routes.</p>
3.26	<p>Whereas pedal cycles are road vehicles, and users of the A303 carriageway throughout the area, the Scheme promoter has grouped them together with pedestrians and equestrians as NMUs and sought to provide for them only by way of segregated off-road facilities and off-line protected onroad routes, not suitable for fast cycling or efficient origin-destination journeys through the area, least of all on the line of the A303. Furthermore, this segregated/off-line provision is incomplete and has an 107pprox.. 1-mile gap. Yet the promoter’s vision is for an “expressway-ready” scheme that does and will prohibit cycling on or adjacent to the carriageway, and is intended to be propagated along the A303 as a whole. Cycles are</p>	<p>Within the Scheme, Highways England has made provision for cyclists to travel safely and conveniently between the western and eastern extents of the Scheme; predominantly on or adjacent to public highway; with off-road provision provided where cyclists are prohibited (i.e. within the tunnel).</p> <p>There is no ‘gap’ in facilities; and cyclists are able to use the roads in Amesbury to return to the A303 at Countess Roundabout.</p> <p>Where journey times would be increased in consequence of the Scheme, such increases would be minor (e.g. up to 6 minutes). Overall, the Scheme will provide an extensive network of routes available to cyclists including 10 miles of surfaced restricted byways and bridleways from which vehicles are excluded. This network includes a good alternative route to the tunnel for cyclists</p>



	<p>even contrasted with vehicles in some relevant Highways England publications.</p>	<p>along the existing A303 with connections to Amesbury via National Cycle Network Route 45 and a new bridleway to Winterbourne Stoke.</p> <p>The Scheme thus provides network connectivity as well as an enhanced experience for non-motorised users passing through the World Heritage Site.</p>
<p>3.27</p>	<p>The promoter has failed to carry out surveys focused on pedal cycle flows on the A303, or cycling journey patterns such as time of day, route or journey purpose. The cycle flows captured en passant in general traffic surveys are restricted as to time of day, and have inconsistent results and low validity. Even so, there is evidence that cyclists do use the main A303 single and dual carriageways.</p>	<p>The traffic survey data collected for the Scheme, in accordance with standard good practice, indicate low levels of cycle use on the A303 between Amesbury and Berwick Down and on adjacent sections, but higher levels on adjacent east-west routes such as A36 and The Packway. These findings are supported by STRAVA heat maps.</p> <p>The Scheme will provide an extensive 10-mile network of paths designed for cycle use linked to adjacent local roads and byways. The existing A303 between Longbarrow and Stonehenge Road will be closed to traffic and available for use by cyclists.</p>
<p>3.28</p>	<p>There is independent evidence, e.g. from the STRAVA app and website, that cyclists are making significant and regular use of the A303 through the scheme. Elsewhere on the A303, well-established official UK cycle Time Trial courses lie on dual carriageway sections of the A303, such as the Andover and Ilchester bypasses. It should be open to the cycling community to establish a new time trial course on the A303 through the Scheme, with its interesting tunnel section, should it wish to do so in the future, as cyclists have a general right to use the highways except for motorways and narrowly defined wholly exceptional cases. The Scheme is neither of these. In line with Highways England's top priority of safety for all who use their roads, there is a clear requirement for cycling to</p>	<p>As noted above, the STRAVA heat map supports the evidence of comparatively low use by cyclists of the A303 corridor compared with other parallel east-west routes.</p> <p>The Scheme provides a safe route for cyclists, taking account of the prohibition on cyclists' use of the tunnel. It is not incumbent on Highways England to create time trial routes.</p>



	<p>be permitted, and safely provided for, along the A303 through the Scheme.</p>	
<p>3.29</p>	<p>Cycling on a fast dual carriageway is not inherently dangerous for experienced cyclists. Many of the hazards met on urban roads are absent, such as limited visibility, parked cars, side roads, mini-roundabouts, pedestrians, poor road surfaces and other obstacles. Driver behaviour is more predictable, as is cycling behaviour. Such cyclists are generally better equipped and their vehicles are typically in good condition. The vast majority of such cyclists are also experienced motorists.</p>	<p>The significant contrast in speed between motor vehicles (including HGVs) and pedal cycles, within a tunnel environment with a 70 mph speed limit would give rise to hazardous scenarios. Due to the constrained space available within a tunnel, it is imperative to maintain a smooth and predictable driving experience through the tunnel. Accordingly, the UK road tunnel standards for tunnels longer than 150 metres prohibit the use of pedal cycles along with other vulnerable road user groups.</p> <p>In recognition of this, the Scheme includes alternative high-quality public rights of way that support the safe movement of non-motorised users through a network of new restricted byways and bridleways. These high-quality facilities provide connectivity across the Scheme and also importantly link into the existing byway network, which connects into the wider unique landscape in the area.</p>
<p>3.30</p>	<p>The alternative route for cyclists, via Stonehenge Road and Amesbury town centre, is unsuitable in its conditions and its location. It uses roads such as London Road, where cycling conditions are so poor the Sustrans left a gap in National Cycle Route 45 rather than endorse the use of this road. A cycle journey from Stonehenge Bottom to Woodhenge would take an estimated 36 minutes via Church Street, instead of 13 minutes via A303 (source: Google Maps).</p>	<p>The Scheme will provide an extensive network of routes available to cyclists including 10 miles of surfaced restricted byways and bridleways from which motor vehicles are excluded. This network includes a good alternative route to the tunnel for cyclists along the existing A303 with connections to Amesbury via National Cycle Network Route 45 and a new bridleway to Winterbourne Stoke.</p> <p>Sustrans' map of the National Cycle Network indicates National Cycle Route 45 as an on-road route between the Stonehenge Road / Woodford Road junction and B&amp;M Homestore on London Road, at which point the off-road route continues in an easterly direction towards Bulford via the Solstice Park junction</p>



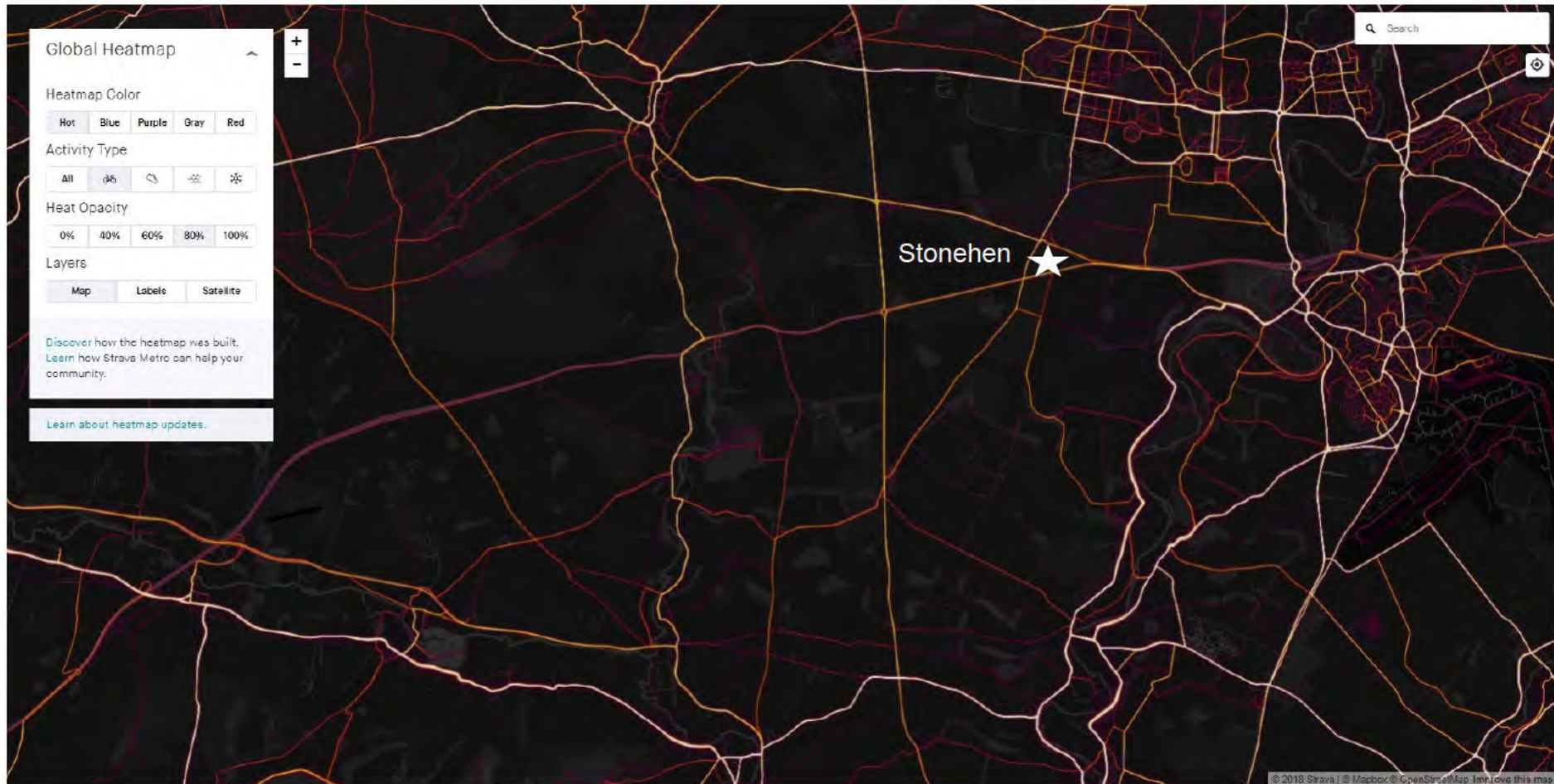
		<p><a href="http://www.sustrans.org.uk/find-a-route-on-the-national-cycle-network/route-45/">(www.sustrans.org.uk/find-a-route-on-the-national-cycle-network/route-45/)</a></p> <p>As described above, the extra journey time incurred by cyclists not being able to use the A303 between Stonehenge Road and Countess is estimated to be 6 minutes if they travel via Stonehenge Road and Amesbury town centre, assuming Countess is the destination (source: Google Maps). This is not considered to be materially significant in the context of a longer journey and there will be an enhanced experience when passing through the World Heritage Site. There will be no increase in the time journeys take via Countess from other directions.</p>
3.31	<p>Provision that will encourage cycling, provide for cyclist safety and provide one or more adequate alternatives in the A303 scheme must include these three facilities:</p> <ul style="list-style-type: none"> <li>i) Additional complete and continuous roadside cycle tracks along the proposed former and existing A303 extending between the eastern tunnel portals and the A303 east of Countess. This is likely to require more land, so the CPO and DCO are unfit for purpose.</li> <li>ii) No prohibition of cycling on the new A303 and its slip roads, including the tunnel sections.</li> <li>iii) Provision to cycle one way along the proposed tunnel emergency walkways, with suitable modifications to the approaches and the design within the tunnels (though not the bore).</li> </ul>	<ul style="list-style-type: none"> <li>i) The Scheme provides a link between the proposed restricted byway and Stonehenge Road, keeping cyclists separate and safe from traffic on the trunk road and enabling cyclists to travel through Amesbury to get to Countess Roundabout.</li> <li>ii) As has been discussed above, it is Highways England's policy to separate cyclists and motorists on new trunk roads on safety grounds.</li> <li>iii) The emergency walkways are an important feature to support the safe operation of the tunnel. In the event of a vehicle breakdown or incident in the tunnel, the walkways provide an area off the carriageway for road users to access the emergency roadside telephones. If cyclists were to use the walkway, there would be insufficient safe passing room. This could lead to cycles blocking an escape route and accidents between cyclists and those leaving their vehicles following an incident, which could also lead to either party being knocked into the carriageway.</li> </ul> <p>As explained above, the Scheme will provide an extensive network of routes available to cyclists including 10 miles of</p>

		<p>surfaced restricted byways and bridleways from which motorised vehicles are excluded. This network includes a good alternative route to the tunnel for cyclists along the existing A303 with connections to Amesbury via National Cycle Network Route 45 and a new bridleway to Winterbourne Stoke.</p>
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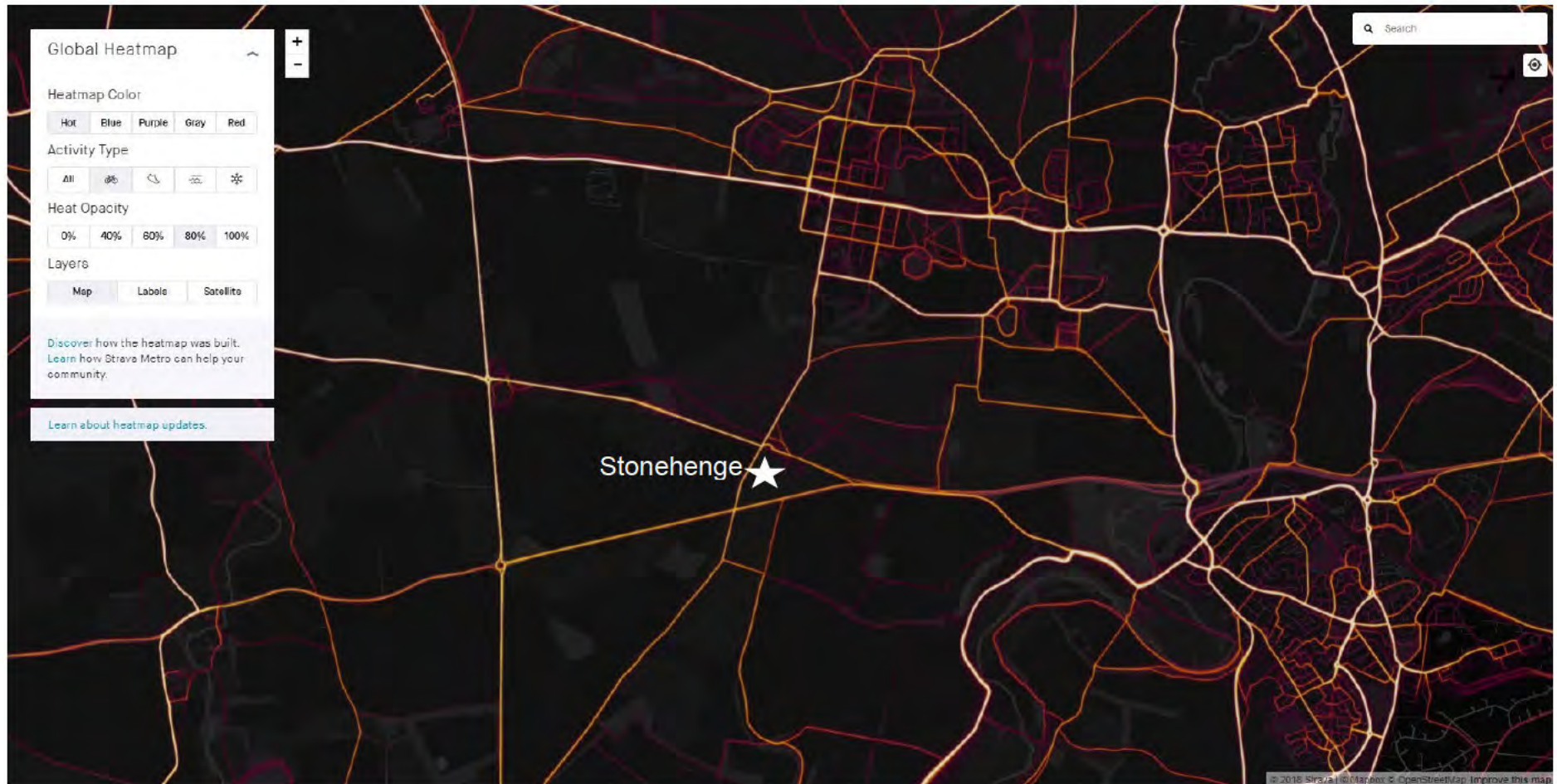
In conclusion, and for the detailed reasons set out above, Highways England does not intend the proposed A303 tunnel to be used by cyclists. Moreover, Highways England considers that the (late) representation submitted by Cycling UK does not present any sound or compelling reasons for Highways England to change that intention or to change the Scheme for which Development Consent is now sought.



Figure 1. STRAVA Heat Map showing cycle-only activities at Stonehenge and the wider surrounding area

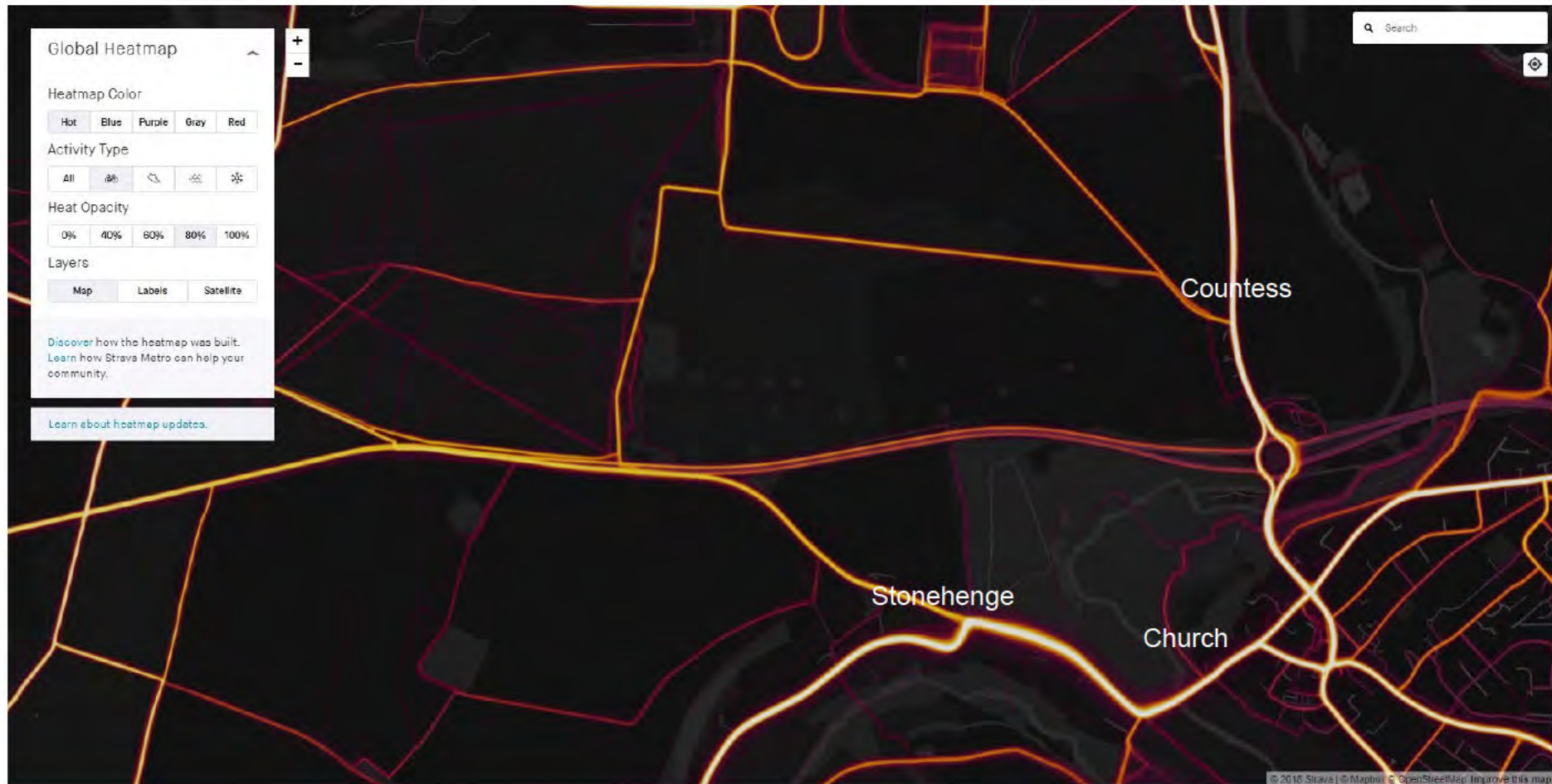


**Figure 2. STRAVA Heat Map showing cycle-only activities at Stonehenge and nearer surrounding area**





**Figure 3. STRAVA Heat Map showing cycle-only activities at Stonehenge Road, Church Street and Countess Road**



## 4 ICOMOS-UK

	Matter Raised	Highways England's Response
4.1	<p>1.7 While it cannot be said that there is full understanding of the meaning of recent discoveries at Durrington, or of precisely how they might inter-relate to other monuments and sites in the landscape beyond visual links, what can be said is that as new attributes of OUV they add significantly to our understanding of the scale and scope of Neolithic/Chalcolithic landscape undertakings, and the importance of spaces between sites where there might be an absence of monuments and only scattered small finds.</p>	<p>The Applicant acknowledges that understanding of the uses and meanings of the WHS landscape is the subject of a constantly evolving debate. As explained in the Applicant's Overarching Response addressing the 'new discovery' [TR010025-001981], the Applicant has provided EIA and HIA Addenda [TR010025-001979 and TR010025-001980] with regards to the 'new discovery' and its contribution to expressing attributes of OUV, to ensure that it has been robustly assessed in the context of the WHS. The Applicant has assessed the significance of the 'new discovery' taking the published evidence at face value, and thereby assuming that they contribute to conveying attributes of OUV and add to our understanding of large-scale prehistoric landscape organisation. These Addenda conclude that no new Likely Significant Effects have been identified or changes to the overall conclusions regarding the impact of the Scheme on the 'new discovery', stated interrelationships, contribution to expressing Attributes of OUV and the WHS as a whole following the 'new discovery'.</p> <p>The lack of impacts of the Scheme upon the 'new discovery' and the interrelated sites and areas put forward in the published paper, taking the paper's conclusions at face value, means that no further investigation is required. The suggested discrete large pit-like anomalies across the landscape outwith the Scheme boundary will not be physically impacted by the Scheme: those that lie within the</p>



Scheme boundary will either be protected and retained in situ, or archaeologically excavated and recorded. The HIA Addendum [TR010025-001980] considers the contribution of the ‘new discovery’ to expressing attributes of OUV, and assesses the impacts and effects of the Scheme on the Attributes of OUV, Integrity and Authenticity of the World Heritage Site (WHS). This HIA Addendum includes assessment of the setting and relationships between the monuments, addressing the stated links to other monuments in the Stonehenge landscape asserted in the 2020 Hidden Landscapes Project paper. The Scheme impact on the OUV of the WHS remains as previously reported in the main HIA [APP-195] submitted with the application.

With regard to the importance of space between sites, the Applicant had already made provision for this. The main HIA [APP-195] considers the importance of spaces between discrete and isolated heritage assets and Asset Groups within the WHS where there might be an absence of monuments and only scattered finds. The DAMS [TR010025-001951] provides for archaeological mitigation fieldwork within the road construction footprint. This commitment allows for the careful archaeological excavation of areas that are considered to be ‘spaces between monuments’ allowing for a better understanding and interpretation of their use and meaning. This has previously been addressed in the Applicant’s response to Comments on any further information requested by the Examining Authority and received at Deadline 5 and 6 [REP7-021, 31.1.5].

		<p>The Applicant would also point the Secretary of State to submissions made by Historic England [TR010025-001972], Wiltshire Council [TR010025-001968], the National Trust [TR010025-001949] and English Heritage Trust [TR010025-001970] as to the evidence base for the ‘new discovery’ and its significance.</p>
4.2	<p>1.8 Although the Durrington discoveries have made the headlines, these are only part of a wider network of Neolithic pit sites identified over the past decade across the WHS. These point up the need for further studies to demonstrate just how far the planned Neolithic/Chalcolithic landscape extended to the west.</p>	<p>These wider pit sites have already been considered. The main ES [APP-044] and main HIA [APP-195, paras. 5.10.22–28] submitted with the application have considered known Neolithic pits published prior to September 2018 as part of the assessment. These include those published in Gaffney et al. 2018 Durrington Walls and the Stonehenge Hidden Landscape Project 2010–2016. Archaeological Prospection. 25(3), pages 255–269 [<a href="https://doi.org/10.1002/arp.1707">https://doi.org/10.1002/arp.1707</a>], which were referred to in Paul Garwood’s presentation on behalf of the Consortium of Archaeologists &amp; Blick Mead Project Team during oral submissions put at Cultural Heritage hearings at the hearing on 21 August 2019 [TR010025-001064]. The Applicant responded to these submissions in oral evidence given at the hearing [see written summary, REP8-016, item 5.1 (ii)]. Within the evaluation area, the Applicant’s geophysical survey identified all the anomalies highlighted by Mr Garwood. With the exception of one anomaly (see ES Addendum: anomaly 001), which lies within a later prehistoric enclosure [APP-212: UID 2039], which will not be impacted by the Scheme and was therefore deliberately excluded from the evaluation, the anomalies discussed by Mr Garwood in his presentation were all subsequently tested by trial trenching and/or boreholes: the assessments made by Highways England</p>



are based on the results of these evaluations [REP1-041; REP1-042 & 043; REP1-045 & 046; REP1-049 & 050; REP1-052 & 053].

The robustness of the evaluation strategy used by the Applicant is demonstrated by the approval by Wiltshire Council and (for sites within the WHS) HMAG of the AESR, OWSI and individual SSWSIs; and by the monitoring of the implementation of the strategy on site and approval of the resulting evaluation reports submitted with the Application and to the Examination. The suitability and comprehensiveness of the evaluation programme were confirmed in evidence by the County Archaeologist, Ms Pomeroy Kellinger on behalf of Wiltshire Council [REP4- 030, items 5 (i) and (ii)]. It is clear therefore that there is no deficiency in the scope or execution of the evaluation strategy. The Applicant stands by its comprehensive and robust evaluations as indicated by Historic England's recent assessment of the Applicant's geophysical surveys in its submission dated 13th August 2020 [TR010025-001972]. No further investigation is therefore necessary.

With regard to the question of "how far the planned Neolithic/Chalcolithic landscape extended to the west", this was discussed during the oral submissions put at Cultural Heritage hearings on 5th and 6th June 2019, including the extent of the Winterbourne Stoke Crossroads barrow group [REP4-030, items 5 and 6]. The Applicant has addressed interpretations of settlement or funerary zones in Comments on any further information requested by the Examining Authority and received at Deadline 4 [REP5-003, para. 34.1.2–7].

Further evaluation of the western portal approaches is not necessary. As previously noted in ISH 2 regarding Cultural Heritage [REP4-030], Wiltshire’s County Archaeologist stated that evaluation fieldwork “was informed by the World Heritage Convention. The principles included that intrusive work would only be undertaken where necessary to understand the impact of the Scheme on key assets. The approach was carefully balanced to ensure damage was minimised or avoided” [REP4-030, item 6 (i)]. The HIA fully considers and takes into account sites of Neolithic and early to mid-Bronze Age date which fall within the setting of the WHS, and whose significance is reinforced by relationships with assets conveying Attributes of OUV located within the WHS, but which are located outside the current WHS boundary to the west and north. The HIA notes, “these monuments were once situated within a more expansive and unified cultural landscape, only the core of which is encompassed by the formal boundary of the Stonehenge WHS” [APP-195, para. 5.10.25]. Any other assets to the west of the WHS affected by the Scheme will be protected by the detailed mitigation measures contained within the DAMS [TR010025-001951].

Regarding the wider question of harm to the OUV from effects outside the boundaries of the World Heritage Site, the Applicant has previously responded to this in its response to second Written Question LV.2.1 [REP6-030], with respect to Longbarrow Junction (in particular responses to parts (vi) and (vii)) and to its response to first Written Question CH.1.58 [REP2-025], noted in relation to agenda item 3.3 (iii) in the Written summary of oral submissions



		<p>put at Cultural heritage, landscape and visual effects and design hearing on 21 August 2019 [REP8-016, item 3.3 (iii)].</p>
<p>4.3</p>	<p>1.10 Knowledge and understanding of the meaning of the Stonehenge landscape has improved exponentially over the past two decades with the use of new non-invasive surveys combined with targeted excavations. And it must be accepted that the landscape could well reveal much more in the future with the use of further as yet undiscovered tools. The idea of the landscape as a resource that holds the potential to provide new evidence and further expand our understanding of prehistory must be respected.</p>	<p>The speculative argument that future technology may discover more information about the WHS is addressed in the Applicant's Comments on Written Representations [REP3-013, para. 21.4.4]. This is further detailed at Point 4.13 below.</p> <p>Future research potential is addressed in the post-hearing note included in the Applicant's written summary of oral submissions made in relation to agenda item 6 at ISH2 regarding ES Chapter 6 [REP4-030] and addressed at Point 4.7 below.</p> <p>As explained in the Applicant's Overarching Response addressing the 'new discovery' [TR010025-001981], the Applicant has put forward a comprehensive archaeological mitigation strategy within the DAMS [TR010025-001951] that allows a flexible and iterative response as the work proceeds, addresses the development of theories and research questions following emerging discoveries, promotes high quality research using innovative data collection approaches and techniques [TR010025-001951, para. 2.3.1c; 6.1.24; 6.3.7–8; sections 6.3–6.7] and includes a strategy for unexpected finds [TR010025-001951, paras. 6.1.19–21; 6.5.8]. The DAMS states, "[...] the proposed Archaeological Research Agenda (ARA) for the mitigation programme [...] is the key to unlocking the potential knowledge that the mitigation work will access and contribute to the potential legacy of enhanced understanding of an internationally iconic archaeological landscape which is essential in response to the impact of the</p>

Scheme. The project presents a unique opportunity to examine a transect through this landscape and the opportunity to deploy innovative approaches and methods to recover maximum information to develop our understanding of the development of this landscape and its use and re-use through time from at least the Mesolithic to the present day. The project has the potential to create a living legacy of archaeological knowledge from the Scheme.” [TR010025-001951, 4.1.1].

The Applicant understands that Wiltshire Council and Historic England consider that the DAMS and its ARA provide an appropriate basis for development of site-specific research questions and SSWSIs. Historic England’s closing submission [AS-111] confirms, “We believe that the dDCO, OEMP and DAMS set out a process to ensure that heritage advice and considerations can play an appropriate and important role in the construction, operation and maintenance of the Scheme [...] we consider sufficient safeguards have been built in for the detailed design stage.” As confirmed in Historic England’s response to the Secretary of State on 13th August, with regards to the DAMS [TR010025-001951]:

*“In our opinion the provisions in the Detailed Archaeological Method Statement (DAMS) are sufficient to enable the Site Specific Written Schemes of Investigations (SSWSIs) to draw on the implications of the SHLP research in finalising the detailing of the programme of archaeological mitigation should the Scheme be granted consent. Safeguards have been included within the DAMS and Outline Environmental*



		<p><i>Management Plan (OEMP) to facilitate the integration of the matters raised by the research into the approach taken to the Scheme.”</i></p> <p>The Applicant further details the fitness for purpose of the DAMS in their Overarching Response addressing the ‘new discovery’ [TR010025-001981, section 5].</p>
4.4	<p>1.11 It should also be noted that the newly discovered pit circle extends beyond the WHS boundaries and this reinforces an understanding of how attributes of OUV spill out into the surrounding landscape, which in turn brings an urgent need to define and protect the immediate setting of the WHS.</p>	<p>With regard to the WHS setting study and the boundary review, these issues were addressed by Department for Digital, Cultural, Media and Sport, Wiltshire Council and Historic England during oral submissions put at Cultural Heritage hearings on 5th and 6th June 2019 [REP4-030]. Wiltshire Council noted that the boundary review was on hold, pending completion of the setting study. Historic England explained that any modification to the WHS boundary (or provision of a buffer zone) would be a lengthy and complex process; any modification to the boundary proposed as a result of the work of Wiltshire Council would then need approval by DCMS and then the World Heritage Committee [REP4-030, item 3.v].</p> <p>In preparing its HIA, the Applicant has carefully considered the historical development and planning context of the WHS, and has taken very seriously its duty to identify those Asset Groups that may contribute to the OUV of the WHS that sit either partially outside or wholly outside the existing boundary of the WHS, reflected in the assessment area used in the HIA [see APP-195, section 5.10]. These were identified at an early stage and confirmed, in consultation with the Heritage Monitoring and Advisory Group (HMAG) and the Stonehenge and Avebury WHS</p>

Coordination Unit, in order to consider the impacts of the Scheme on them. The assessment area for the Applicant's HIA takes this context into consideration, noting that it "comprises the whole of the Stonehenge part of the Stonehenge, Avebury and Associated Sites WHS **and its setting**" [APP-195, section 5.10]. The HIA acknowledges that "the effects of the Scheme may extend beyond the boundaries of the Stonehenge part of the WHS." [APP-195, para. 5.10.2]. The HIA takes into account the draft minor boundary review [APP-195, para. 5.10.4] and considers impacts upon both sites located within the current WHS boundary, and physically related archaeological features that contribute to OUV located outside the current boundary. With insufficient certainty available about any potential future changes, any application must necessarily deal with the limits of the WHS as they apply at the time it is made. This is further addressed in the Applicant's Comments on Written Representations [REP3-013, paras. 21.4.87–92; 65.1.2; 65.1.5; 68.3.8–9], during oral submissions put at Cultural Heritage hearings on 5th and 6th June 2019 [REP4-030, page 2-4] and in the Relevant Representations Report [AS-026, pages 11-26 to 11-27]. The HIA Addendum [TR010025-001980] also considers the elements of the 'new discovery', and potential interrelationships with other heritage assets stated in the 2020 SHLP paper, located both within and outside the WHS boundary and concludes that the findings from the original HIA [APP-195] would be unchanged.



4.5

2.2 The Durrington finds also underline the necessity to clearly understand how small individual sites link to form larger spatial landscape formations and encompass areas which may have no monuments or sites and only scattered finds. This clearly reinforces the idea that lack of evidence of monuments and sites in certain parts of the property cannot be said to suggest that nothing of value exists at a landscape scale. There now should be no doubt that the WHS cannot be seen as a collection of prehistoric monuments and sites interspersed by blank spaces into which development could be allowed.

The Applicant's assessments [APP-044; APP-195] and the Scheme design [APP-195, section 8.2, iterative design and embedded mitigation] already consider known monumental and landscape-scale heritage assets, isolated and discrete archaeological remains, and intervening archaeological landscapes. The Applicant's mitigation programme as set out in the DAMS [TR010025-001951] provides a comprehensive strategy for the mitigation of impacts on both known and unknown archaeological remains.

The extensive work done by the Applicant assessing the effects of the Scheme already considers those effects at a landscape scale, including the gaps between monuments. The assessment has regard to historic landscape character [APP-044, section 6.9; APP-215; APP-045; APP-195, section 6.4], spatial context, geology and topography [APP-195, section 6.2], and setting [APP-218], emphasising the 2015 WHS Management Plan's declaration that individual sites and asset groups form "a legible part of a cohesive, fossilised prehistoric landscape that contains many archaeologically significant sites and monuments with complex contextual associations and relationships. This provides 'an outstanding illustration of the evolution of monument construction and of the continual use and shaping of the landscape over more than 2000 years, from the Early Neolithic to the Bronze Age" [Simmonds and Thomas 2015, para. 2.3.15].

With regard to Attribute 6, *The disposition, physical remains and settings of the key Neolithic and Bronze Age funerary, ceremonial and other monuments and sites of the period, which together form*



*a landscape without parallel*, the 2015 WHS Management Plan notes, “In other parts of the WHS, however, the monuments and sites have become degraded or masked and their significance and physical relationships to one another and the landscape are no longer visible to the naked eye, but are nevertheless equally attributes of the Site’s OUV. There are also areas which appear to have been deliberately left empty of monuments. These are important for our constantly developing understanding of the landscape as a whole” [Simmonds and Thomas 2015]. The HIA notes, “If, as is widely accepted, the siting of monuments in relation to each other is, or was significant, then it can be extrapolated that meaning may also have been attached to the gaps between them [...] [APP-195, page 351]. The HIA also considers theories regarding movement between areas, processional routes and possible zonation.

With regard to understanding “how small individual sites link to form larger spatial landscape formations”, the HIA notes, “The identification of Asset Groups takes account of sites and monuments with no surface expression, including ploughed-down earthworks. Archaeological features such as pit clusters and artefact scatters in the ploughzone are also considered. Their significance is assessed as part of the ‘Associated Sites’ element of the WHS and in relation to their research potential” [APP-195, para. 5.10.18]. The significance of scattered finds, such as lithic scatters and ploughzone artefact scatters, is addressed in the ES [APP-044] and the HIA [APP-195]. With regard to the comparative significance of these sites in the landscape, the HIA notes, “Many Neolithic and Early Bronze Age occupation sites are characterised



by artefact scatters dominated by struck flint, although the finds are more likely to be accompanied by sub-surface features such as pits and postholes than in earlier periods [...] Settlement sites are amongst the range of prehistoric monuments and sites mentioned in the SoOUV. Proven Early Neolithic to Early Bronze Age settlement sites may therefore be considered to be of Very High value” [APP-195, para. 9.3.5]. The significance of finds scatters in the context of landscape zonation has been addressed during the Cultural Heritage hearings on 5th and 6th June 2019 [REP4-030, item 7 (ii)].

Consideration of the spaces in between, the inter-relationships, articulations and patterning of sites in the landscape, the setting of heritage assets and the impacts of the Scheme on the invisible sites, features and artefact scatters that have the potential to contribute to the OUV of the WHS in those spaces, therefore, is already an integral part of the HIA [APP-195]. This has previously been discussed in the Applicant’s oral submissions regarding harm to OUV in put at Cultural heritage, landscape and visual effects and design hearing on 21 August 2019 [REP8-016, item 3.3].

4.6	<p>2.3 Overall, the Durrington discoveries have highlighted the exceptional sensitivities of the Stonehenge landscape, the massive scale of its prehistoric landscape concepts, and the urgent need for more research to allow a fuller understanding of their scope and embedded meaning. They also draw attention to the recognition in the SoOUV that knowledge and understanding of the landscape has</p>	<p>The Applicant has assessed the significance of the ‘new discovery’ based on the published evidence. The Applicant submitted addenda to the ES [TR010025-001979] and HIA [TR010025-001980] to the Secretary of State on the 13th August 2020 which considered the Scheme’s impact upon the ‘new discovery’ and its stated interrelationships, taking the conclusions of the published evidence at face value. As with the main ES and</p>
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improved since the time of inscription, and furthermore, and most crucially, that the landscape needs to be treated as an important resource for future archaeological research with its potential to uncover new evidence that could expand even further our understanding of pre-historic societies.

main HIA, these Addenda continue to consider theories regarding the arrangements of monuments and spaces, relationships between sites and areas, potential 'processional activities' and the concept of 'imbued boundaries'. The Applicant's assessment demonstrates that the Likely Significant Effects, as reported in the main ES [APP-044], and the conclusions of the main HIA [APP-195] do not change following the publication of the 'new discovery'.

Further investigation is therefore not needed since the Addenda show that, even assuming the conclusions of the publication are correct, there are no significant impacts of the Scheme upon the 'new discovery' and the interrelated sites and areas put forward in the published paper. The suggested discrete large pit-like anomalies across the landscape outside of the Scheme boundary will not be physically impacted by the Scheme: those that lie within the Scheme boundary will either be protected and retained in situ, or archaeologically excavated and recorded, in line with the commitments in the Detailed Archaeological Mitigation Strategy (DAMS) [TR010025-001951]. The HIA Addendum [TR010025-001980] assesses the impacts and effects of the Scheme on the Attributes of OUV, Integrity and Authenticity of the World Heritage Site (WHS) in the context of the 'new discovery'. This HIA Addendum includes assessment of the setting and relationships between the monuments, addressing the stated links to other monuments in the Stonehenge landscape asserted in the 2020 Hidden Landscapes Project paper.



Associations between monuments, areas and sites in the Stonehenge landscape have been, and continue to be, subject to a wide range of disparate theories, speculations and interpretations which have competed, changed and in turn inspired further hypotheses over the course of hundreds of years. This very aspect gives rise to the seventh Attribute of OUV of the WHS: 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.

Dealing with the point that further research is required to understand the impact of the Scheme on landscape-related issues, the Applicant disagrees. A comprehensive and robust evaluation programme has been undertaken and known sub-surface archaeological features are addressed in the main ES [APP-044] and main HIA [APP-195]. The suitability and comprehensiveness of the evaluation programme were confirmed in oral submissions put at Cultural Heritage hearings in June 2019 by the County Archaeologist, Ms Pomeroy Kellinger on behalf of Wiltshire Council [REP4-030, items 5 (i) and (ii)]. The draft Archaeological Evaluation Strategy Report (AESR) and its accompanying and Overarching Written Scheme of Investigation (OWSI) were developed in consultation with A303 Heritage Monitoring and Advisory Group (HMAG, comprising representatives of Wiltshire Council and Historic England as statutory bodies, and the National Trust and English Heritage Trust) and the Scientific Committee of independent experts [REP3-013, para. 56.1.65]. The AESR and OWSI were approved by Wiltshire Council and HMAG and guided the development by

Highways England of Site Specific Written Schemes of Investigation (SSWSIs): these SSWSIs were approved, and their implementation on site monitored, by Wiltshire Council and, for sites within the WHS, HMAG. HMAG approved the scope, coverage, area and techniques to be employed in the Applicant's Archaeological Evaluation in the WHS.

The archaeological evaluation results, combining non-intrusive geophysical surveys, ploughzone artefact sampling and testing by trial trenching, form a robust baseline on which to make assessments of the impacts of the Scheme upon archaeological remains. This combination of non-intrusive and intrusive techniques is standard archaeological practice and accords with the Chartered Institute for Archaeologists (CIfA) Standard and Guidance for archaeological field evaluation. Geoarchaeological and environmental sampling and scientific dating were undertaken as part of the evaluation process in consultation with qualified specialists, in accordance with the Archaeological Evaluation Strategy Report (AESR, [Highways England, 2018a](#)) and Overarching Written Scheme of Investigation for Archaeological Evaluation (OWSI; [Highways England, 2018b](#)). These were developed in consultation with, and approved by, Wiltshire Council and HMAG, with advice from the Scientific Committee.

The robustness of the evaluation strategy is demonstrated by the approval by Wiltshire Council and (for sites within the WHS) HMAG of the AESR, OWSI and individual Site Specific Written Scheme(s) of Investigation (SSWSIs); and by the monitoring of the implementation of the strategy on site and approval of the



resulting evaluation reports. The suitability and comprehensiveness of the evaluation programme were confirmed in evidence by the County Archaeologist on behalf of Wiltshire Council [REP4-030, items 5 (i) and (ii)]. It is clear therefore that there is no deficiency in the scope or execution of the evaluation strategy. The Applicant stands by its comprehensive and robust evaluations as indicated by Historic England's recent assessment of the Applicant's geophysical surveys in its submission dated 13<sup>th</sup> August [TR010025-001972].

As far as the potential for other new discoveries is concerned, the DAMS provides a comprehensive strategy for the mitigation of impacts on both known and unknown archaeological remains. The scope of the DAMS provides for site-specific research questions to be developed with input from specialists, for natural features containing cultural material to be fully excavated, and for iterative development of strategies on site that respond to the nature and significance of the features encountered. These provisions provide ample scope to address discoveries during the mitigation programme, and to take account of new research within the WHS.

It is assessed that the Scheme will not impact on the 'new discovery' or the sites and areas which the Hidden Landscapes Project theorises may be associated with it. The ES and HIA assess impacts on known and likely heritage assets for which there is archaeological evidence based on previous studies, comprehensive field surveys and ground truthing; the DAMS provides a robust, flexible iterative strategy, discussed with and

approved by stakeholders, for the mitigation of impacts on both known and presently unknown archaeological remains.

With regard to resources for future archaeological research, under the DAMS the archaeological results and the archive of finds and reports must be publicly disseminated and made available for study in the future, enabling knowledge of the ancient landscape to be re-evaluated as knowledge of our past and scientific techniques evolve. These mitigation measures will make a significant contribution to the investigation of the spatial and chronological development of the WHS and thus, to transmitting understanding of its OUV and furthering the public appreciation of the WHS [See section 9, TR010025-001951].

In this context, in summary, no separate further investigation is required – known and likely heritage assets are already assessed in extensive detail in the ES and HIA and the reflexive and iterative investigation strategy and unexpected finds procedure required under the DAMS ensures that a necessary and appropriate further level of investigation and responsiveness to any new discoveries and improvement of understanding and knowledge, as discussed with and approved by stakeholders, is already provided for as part of the suite of documents that are secured under the DCO.

4.7	2.4 Under the current road proposals, the Eastern Portal and its associated road infrastructure would destroy any possibility of further long term research or of large scale discoveries between the Avenue and Durrington. The structures would also install a permanent and irreversible	The research potential of the WHS is recognised in the HIA, which notes: “It is not considered that the proposed Scheme will alter the nature, pace or quality of the research that will continue to take place within the WHS. The proposed Scheme will not impact upon
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divide between important facets of the prehistoric landscape, Durrington pit circle and the Avenue, which could be closely linked in terms of their use and significance.

the analysis, interpretation and dissemination of the results of field research. Although archaeological evaluations and excavations within the footprint of the proposed Scheme will remove archaeological deposits, the Scheme has been designed to minimise land-take and limit impacts on archaeology, through a comprehensive programme of archaeological evaluation (see response to Point 4.5) and a reflexive and iterative investigation strategy and unexpected finds procedure required under the DAMS [TR010025-001951]. Archaeological interventions in connection with the proposed Scheme are being undertaken to high standards developed with HMAG and the Scientific Committee, and have the potential to contribute significant data to ongoing research priorities” [APP-195, para. 9.3.75]. The DAMS is research-led, rooted in the Archaeological Research Agenda [TR010025-001951; section 2].

The Scheme would not “destroy any possibility of further long-term research or of large-scale discoveries between the Avenue and Durrington” and does not physically impact on the area of the “Durrington pit circle”. The eastern portal is located within the base of a dry valley and just to the north of the existing road and its cutting. The area would be carefully archaeologically excavated and recorded prior to construction, in line with the commitments in the DAMS [TR010025-001951], which would add to archaeological research and knowledge.

The Scheme will not prevent future research within the WHS. This is detailed in the Applicant’s Comments on Written Representations [REP3-013, paras. 20.4.111–121], which notes

“The proposed Scheme would provide powers to impose restrictions which may affect future archaeological research above the tunnel route, in order to protect the structural integrity of the tunnel. There are no restrictions intended to be placed on future archaeological research elsewhere [...] The restriction would not prevent excavations from being undertaken [...] but would require a promoter of future archaeological research to consult with Highways England in such cases in order to determine the extent to which that activity might have the potential to affect the structural integrity of the tunnel.” This is further detailed in Comments on any further information requested by the Examining Authority and received at Deadline 4 [REP5-003, para. 19.1.7] and the Applicant’s oral submissions regarding Tunnel Protection Zones put at Cultural heritage, landscape and visual effects and design hearing on 21st August 2019 [REP8-016, item 5 (iv)]. The proposed tunnel crosses the course of the Avenue at approximately chainage 10300 to 10340. East of the Avenue, the tunnel continues for c.60m, with the tunnel emerging at the eastern tunnel portal through a short section of cut and cover tunnel approximately 85m in length extending eastwards from the bored tunnel section. Consultation with Highways England would be required prior to any future archaeological investigations in this area. There would be no restriction introduced by the DCO on archaeological excavations elsewhere in the WHS, including the extensive area between the Avenue’s ‘elbow’ and the ‘new discovery’, c.660m to the northeast.

The Scheme would not “install” a permanent and irreversible divide. The existing road already acts as a permanent divide. The



		<p>Scheme would instead <i>reduce</i> that divide in length and scale and reconnect the Avenue where it is currently crossed by the existing A303.</p>
<p>4.8</p>	<p>2.5 The construction of the proposed western portal and its associated cutting raises similar issues. Here we know that this would lead to the destruction of significant parts of large scale, pre- historic landscape concept. When the Durrington Walls settlement ceased to be used, a new settlement was developed in the west extending from the western edge of the Greater Cursus south towards the A303. The proposed cutting would destroy many dozens of burials of this later second domestic focus, which should be viewed as of equal importance to the earlier one as it had a similar complementary status with the main henge, reflecting the domain of the living as opposed to the domain of the ancestors.</p>	<p>With regard to the suggestion that the western portal "would lead to the destruction of significant parts of large scale, pre- historic landscape concept", Highways England has previously responded to assertions regarding the significance of archaeological remains at the western portal in Comments on any further information requested by the Examining Authority and received at Deadline 4, noting that "The suggestion of a 'large settlement' is not demonstrated by the evidence from the evaluation and any such settlement lies outside the Scheme boundary" and "The results of the evaluation at the western portal confirm survival of a palimpsest of artefactual evidence representing activity over a long period of time" [REP5-003, 34.1.2; 34.1.5]. The DAMS notes, "Overall, the results from the western portal evaluation tend to support the notion of the area south and east of Winterbourne Stoke Crossroads as a preferred one for lithic tool use and deposition [...] The combination of Late Neolithic or Early Bronze Age lithic scatters, Beaker pits and Beaker graves may suggest the presence of a zone of Beaker occupation in the western portal Approach" [TR010025-001951, para. 4.6.16]. The results of the evaluation at the western portal are reported in detail in REP1-045 and 046 and the artefact distributions are considered further in REP3-024. The reflexive investigation strategy and unexpected finds procedure required under the DAMS [TR010025-001951] will ensure that a necessary and appropriate level of investigation and</p>



responsiveness to any new discoveries. The DAMS, developed in consultation with members of HMAG and with input from the Scientific Committee, captures current research questions and thinking; its reflexive and iterative nature provides ample scope to address discoveries during the mitigation programme, and to take account of emerging discoveries, theories and understanding of the uses and development of the WHS landscape.

With regard to the “a new settlement [...] developed in the west extending from the western edge of the Greater Cursus south towards the A303”, the southernmost extent of this area, defined in a paper published in 2017 by Josh Pollard and colleagues [Pollard, J. et al., 2017. Remembered and Imagined Belongings: Stonehenge in the Age of First Metals. In: P. Bickle, V. Cummings, D. Hofmann and J. Pollard, eds. The Neolithic of Europe: Papers in Honour of Alasdair Whittle. Oxbow, pages 279–297] lies at least 350m north of the Scheme boundary. The Applicant respects this evidence but considers that any such settlement lies outside the Scheme boundary and as such would not be directly impacted. This has previously been discussed in Comments on any further information requested by the Examining Authority and received at Deadline 4 [REP5-003, 34.1.3; 34.1.5].

With regard to the claim that “many dozens of burials” will be destroyed, there is no evidence for any dense burial groups, flat grave cemeteries, burial monuments/other monuments of Neolithic or Early Bronze Age date within the Scheme construction footprint for the western portal or the approach cutting. This is addressed in the Applicant’s Comments on Written Representations [REP3-013,



paras. 12.3.182–3; 12.3.189; 12.3.191; 47.1.22–23], and Cultural Heritage hearings in June 2019 and the related post-hearing note [REP4-030, Agenda items 5 (i) & (ii)]. The archaeological evaluation of the western portal and approach cutting has confirmed the results of geophysical survey and previous fieldwork. A limited number of subsurface features were exposed in the trial trenches, including a single isolated crouched burial and several isolated pits which, together with artefactual material in the plough zone indicates activity in the area during the Early Bronze Age period. A small hengiform monument observed in geophysical surveys lies outside of the footprint of the works for the approach cutting and would not be affected by the Scheme. [APP-044, para. 6.6.31; REP1-045 and 046; REP3-023]. Burials (including features suspected of being burials) will be investigated in accordance with the DAMS strategy for the recovery of human remains [TR10025-001951, paras 6.3.75 to 6.3.88], in accordance with Article 16 of the DCO [AS-121]. In the event that any further burials are identified in Site 24, within the Scheme footprint in the western portal and approaches, these will be subject to archaeological excavation and recording in accordance with the DAMS [TR10025-001951, pages 304-309]. At Site 39, within the DCO boundary but north of the Scheme footprint, archaeological remains would be protected and preserved in situ [TR10025-001951, pages 358-359].

Regarding the suggestion of the zonation of the landscape into a 'domain of the living' in the east and a 'domain of the ancestors' in the west, the Applicant has responded previously on the impact of the Scheme on the western settlement [see above]. The HIA notes

that “Parker Pearson and Ramilisonina (1998) [Parker Pearson, M. and Ramilisonina, 1998. Stonehenge for the ancestors: the stones pass on the message. Antiquity Volume 72, pages 308–326] have speculated that there was a dualistic relationship in which Stonehenge was associated with the dead, whilst Durrington Walls was seen as the land of the living, with the Avon forming part of a processional route between the two.” [APP195, pages 296; 299; 351; 403]. While it is possible to read the evidence this way, it is not necessarily the case, nor is it the consensus [REP5-003, para. 34.1.30].

4.9  
 2.6 Both of these interventions have been justified on the basis that no finds of significance have been found in the areas of the proposed cutting, portals or associated roads in the east. But as the Durrington pit circle has shown, prehistoric landscape planning cannot be identified on the basis of small scale surveys, as areas with only small-scale scattered finds, but no monuments or substantial sites, can be part of larger-scale planned designs.

The Applicant’s assessment does consider larger-scale planned design while at the same time taking a proportionate approach, in accordance with guidance and best practice, to gathering information.

As noted in the Applicant’s response to Point 4.5 above, the Scheme design and the Applicant’s assessments already consider known monumental and landscape-scale heritage assets, isolated and discrete archaeological remains, and intervening archaeological landscapes. The assessment and design of a scheme necessarily involves a staged, iterative process of identifying the known heritage constraints including the wider landscape context, determining the presence or absence of archaeological remains through targeted field evaluation, and systematically identifying and assessing the setting and significance of the heritage assets.



The HIA [APP-195] therefore already considers the importance of the ‘spaces in between’, and the Scheme’s impacts on the ‘new discovery’ and the interrelated sites and areas said to be associated with it have been assessed in the Addenda to the ES [TR010025-001979] ad HIA [TR010025-001980], as described in the Applicant’s response to Point 4.1 above. The comprehensive, research-led mitigation strategy, set out in the DAMS [TR010025-001951], would continue this approach.

As noted at Point 4.6 above, the Applicant has undertaken comprehensive and robust archaeological field evaluation within the DCO boundary, carried out at an unprecedented level of detail commensurate with the status of the WHS. The County Archaeologist has confirmed Wiltshire Council’s view that the evaluation programme was comprehensive, and it is considered that enough information has come to light to give confidence going into the mitigation stage [REP4-030 item 5 (i), (ii)]. An archaeological evaluation, as defined in the guidance of the Chartered Institute for Archaeologists [CIfA 2020, Standard and guidance for archaeological field evaluation. Chartered Institute for Archaeologists, Reading, page 4] is targeted at addressing “the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts and their research potential, **within a specified area** or site on land, inter-tidal zone or underwater. If such archaeological remains are present field evaluation defines their character, extent, quality and preservation, reports on them and enables an assessment of their significance in a local,

regional, national or international context as appropriate.” This has been achieved.

The International Committee for the Management of Archaeological Heritage ‘s 1990 Charter for the Protection and Management of the Archaeological Heritage states that “It must be an overriding principle that the gathering of information about the archaeological heritage **should not destroy any more archaeological evidence than is necessary** for the protectional [sic] or scientific objectives of the investigation. Non-destructive techniques, aerial and ground survey, and sampling should therefore be encouraged wherever possible, in preference to total excavation.” The Applicant’s evaluation has achieved the objective of informing decision-making and gathering the information necessary to inform a comprehensive, research-led mitigation strategy, set out in the DAMS [TR010025-001951], while not destroying more evidence than is necessary.

These principles are echoed in previous submissions. As previously noted in ISH 2 regarding Cultural Heritage [REP4-030], Wiltshire’s County Archaeologist stated that evaluation fieldwork “was informed by the World Heritage Convention. The principles included that **intrusive work would only be undertaken where necessary** to understand the impact of the Scheme on key assets. The approach was carefully balanced to ensure damage was minimised or avoided” [REP4-030, item 6 (i)]. As the Applicant stated at the hearing, “in general, the approach taken to archaeological investigation and mitigation will always include an element of sampling, and in this respect, the approach taken for



		<p>the Scheme is consistent with good practice. There is a balance to be struck with the recovery of information and the loss of remains” [REP4-030, items 5 (i) and (ii)]. It would therefore not be appropriate to undertake intrusive evaluation beyond the Scheme boundary.</p> <p>As the Applicant has previously noted, “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 [trial trenching in previous iterations of the Scheme since 1990] to achieve an overall sample of up to 5% by area outside of the WHS and between 5% and 10% by area within the WHS [noting that in the majority of areas within the WHS within the construction footprint for the Scheme the percentage sample was closer to the 10% mark], and taking into account the emerging results of academic research programmes undertaken over the last decade” [REP5-003, 34.1.16].</p>
4.10	2.6 (sic) All of this reinforces the assertion made throughout the Public Hearings by many parties that there can be no justification for destroying swathes of the Stonehenge landscape on the basis that nothing has been found, or nothing of major importance, when the OUV of the property relate to large-scale	<p>The Scheme has been assessed and designed with full consideration of landscape scale features and effects. The extensive and thorough assessment concludes in the HIA that the scheme overall has a slight beneficial effect on the WHS</p>



Neolithic/Chalcolithic landscape planning, now revealed to be on a scale not known elsewhere in Britain or in any other site so far inscribed on the World Heritage list, and is predicated on the idea that the overall landscape must be kept as a resource to allow research and surveys to reveal over time the evidence it holds.

2.7 The new finds have thus strengthened the meaning of a 'landscape without parallel' to embrace integrated prehistoric planning at a scale found nowhere else within the World Heritage list, and which could be even more extensive than is currently known.

(including beneficial effects at a landscape scale) and its OUV is sustained.

As set out above in Points 4.5 and 4.9 above, the Scheme design and the Applicant's assessments consider known monumental and landscape-scale heritage assets, isolated and discrete archaeological remains, and intervening archaeological landscapes. The assessment and design of a scheme necessarily involves a staged, iterative process of identifying the known heritage constraints including the wider landscape context, determining the presence or absence of archaeological remains through targeted field evaluation, and systematically identifying and assessing the setting and significance of the heritage assets. The Scheme design has been informed by comprehensive archaeological impact assessments, surveys, sampling and thorough scientific evaluation. The archaeological investigation and documentation proposed in the DAMS [TR010025-001951], which would need to be adhered to in compliance with the DCO (if granted), is directed at addressing research questions, and will only investigate areas impacted by the Scheme; other areas will be protected and preserved in situ. These excavations will be undertaken in accordance with agreed international and national professional standards.

The Applicant has assessed the significance of the 'new discovery' based on the published evidence. The Applicant submitted addenda to the ES [TR010025-001979] and HIA [TR010025-001980] to the Secretary of State on the 13th August which considered the Scheme's impact upon the 'new discovery'



and its stated interrelationships. The Likely Significant Effects, as reported in the main ES [APP-044], and the conclusions of the main HIA [APP-195] do not change following the publication of the 'new discovery'.

The Applicant would also point the Secretary of State to submissions made by Historic England [TR010025-001972], Wiltshire Council [TR010025-001968], the National Trust [TR010025-001949] and English Heritage Trust [TR010025-001970] as to the evidence base for the 'new discovery' and its significance.

4.11

3.1 In our earlier contributions, the inadequacies of the Heritage Impact Assessment (HIA) were clearly set out in relation to the impact of the proposals on the integrity of the overall WHS as well as the integrity of individual sites and clusters of sites. What was not properly considered was impact on landscape links and landscape planning: rather the HIA concentrated on assessing impact on individual 'assets' or 'asset groups' as they were called.

3.2 Although '*The disposition, physical remains and settings of the key Neolithic and Bronze Age funerary, ceremonial and other monuments and sites of the period, which together form a landscape without parallel*'<sup>2</sup> was seen as an attribute, the analysis of impact focused on how the Scheme would '*improve the setting of numerous assets within the WHS*'<sup>3</sup>, '*avoid major known concentrations of archaeological remains*

It should be noted that the Applicant has followed the accepted and uniformly followed appropriate guidance in undertaking its HIA (ICOMOS 2011) and the HIA Scoping document was endorsed as appropriate by the UNESCO World Heritage Centre/ICOMOS Advisory Mission in 2018. The HIA Scoping Report and its approach was approved by HMAG (including Historic England, Wiltshire Council, the National Trust and English Heritage). The HIA Scoping Report and its approach was approved by HMAG (including Historic England, Wiltshire Council, the National Trust and English Heritage). Historic England also noted that the HIA was thorough and broadly concurred with the assessment in the HIA in its application of the ICOMOS 2011 guidelines [TR010025-001972] and the overall assessment conclusions. In particular, Historic England stated in that submission (para 2.4.10):

"We consider that the assessments conducted under the Scheme were sufficiently rigorous to inform determination of the Scheme and development of an appropriate and proportionate



*that contribute to the OUV of the WHS'4 and although 'it would have adverse effects on the setting of some assets and Asset Groups'<sup>5</sup>, the beneficial effects were considered 'to slightly outweigh the adverse effects of the Scheme in terms of this Attribute'<sup>6</sup>. Nowhere was the impact on the overall form or spatial arrangement of the landscape considered.*

archaeological mitigation strategy. The recently published research does not change our view of those assessments."

The Applicant provided full responses on its approach to undertaking the HIA throughout examination, for instance in the Applicant's response to the Examining Authority's Written Question CH.1.4 [REP2-025, pages 5-10 to 5-11], at Written Question G.1.1 [REP2-021], in its response to agenda item 3 (vi), 4 (i), 4 (ii) and 4 (iii), in the oral submission report from ISH2 [REP4-030] and appendix A of that oral submission report.

The Applicant also directs the Secretary of State to a similar line of argument by ICOMOS UK and the Applicant's detailed response to this [REP7-021, para. 31.1.2] which provides a further explanation as to how the Attributes of OUV, Integrity and Authenticity have been considered in relation to the whole WHS in support of the Applicant's position that this approach is correct and supported by the relevant guidance.

The HIA considers "landscape links and landscape scale planning", setting out the spatial context, geology and topography, the chronological context and the historic landscape context of the study area [APP-195, sections 6.2–6.4]. It describes the condition of the whole and of individual Attributes and components, physical characteristics, viewpoints, spatial patterning and contextual associations which may relate to Attributes, as well as the design, position and inter-relationship of the monuments. The HIA draws on a broad evidence base including the results of investigations from both research and development-led rescue excavation [APP-195, section 6]. The Attributes of OUV stress the importance of the



siting of the sites and monuments in relation to the landscape, in relation to the skies and astronomy, in relationship to each other, and their siting, physical remains and setting that together form a landscape without parallel. The HIA considers and assesses the impact of the Scheme on Attributes of the OUV of the WHS, including the setting and relationships between the monuments within the visual envelope of the WHS. ES Chapter 6, Cultural Heritage [APP-044], reports impacts on all designated and non-designated heritage assets, including the Stonehenge, Avebury and Associated Sites WHS. These are informed by ES Appendix 6.9 - Cultural Heritage Setting Assessment [APP-218], and draw on data from other technical disciplines.

In summary, in accordance with ICOMOS HIA guidance, both positive and negative impacts are considered against attributes of OUV integrity and authenticity and a judgment arrived at on the overall significance of effect, and it should also be noted that the Scheme has been designed to avoid assets that contribute significantly to the OUV of the WHS. The HIA [APP-195] does deal with inter-relationships between assets and Asset Groups and looks at the wider impacts of the Scheme upon the Attributes of OUV and the WHS as a whole, including “the impact on the overall form or spatial arrangement of the landscape”.

4.12	3.3 The HIA also outlined impact on the integrity of physical relationships between the monuments such as between the Normanton Down Barrows , the Winterbourne Stoke Crossroads Barrows and the Diamond Group, as well as visual and physical	The HIA notes that “ <i>The Stonehenge and Avebury WHS Research Framework identified six broad themes, reflecting the various aspects of the unique character of these landscapes: connected landscapes, ceremonial monuments, burials and barrows, landscape history and memory, human generations and daily life</i> ”
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relationships between long barrows in the western part of the WHS and other dispersed barrows and associated monuments (and further examples) and yet concluded that impact on integrity overall was '*Negligible Positive impact on the Integrity of the WHS, resulting in a Slight Beneficial effect*'.<sup>7</sup>

3.4 The assessment included no clear acknowledgment of the way these visual and other spatial links between monuments and sites was part of a much larger scale spatial planning and thus did not suggest what impact cutting into these connections might have.

*(Leivers and Powell 2016, 12). Discrete and isolated sites include sites related to these themes, as well as geographically or thematically isolated sites, and also include isolated barrows and burials.*" [APP-195, para. 5.10.23].

The HIA clearly considered the visual and other spatial relationships between Neolithic and Early Bronze Age heritage assets, and the setting and articulation of sites within the landscape, providing a contextual overview [APP-195, 6.9] and impacts and effects on Asset Groups within and in the vicinity of the WHS in the western part of the WHS [APP-195, pages 177–443], which detail attributes of setting, known and theoretical relationships and zonation, integrity, authenticity and contribution to the attributes that convey the OUV of the WHS.

The HIA baseline [APP-195, section 6] addresses, for every asset group and discrete and isolated assets, the way in which assets convey the Attributes of OUV – including the siting of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to the landscape and each other (Attribute 3), and the disposition, physical remains and settings of the key Neolithic and Bronze Age funerary, ceremonial and other monuments and sites of the period, which together form a landscape without parallel (Attribute 6) – both in terms of intra-group relationships and their broader landscape context and setting.

The HIA [APP-195], therefore, clearly articulates the visual and spatial relationships between assets and asset groups and the impacts the Scheme would have on these relationships, particularly in relation to Attributes 3 and 6. It is, therefore,



		<p>incorrect for ICOMOS to say that the HIA does not clearly acknowledge these visual and spatial relationships or that the HIA does not consider the impacts at a landscape scale.</p>
<p>4.13</p>	<p>3.5 A further gap in the HIA is the lack of any assessment of impact on the potential of the landscape to reveal more evidence.</p> <p>3.6 These weaknesses have become all the more apparent in the light of the Durrington pit circle finds. These new attributes clearly demonstrate the scale of formal, spatial, landscaping that was undertaken in the Neolithic period, with long distance links across a circle of around a mile in diameter reinforced by visual links between Durrington Walls henge and the main henge that are even further apart.</p> <p>3.7 The new finds clearly demonstrate the high potential for the landscape to reveal significant new facets of prehistoric spatial landscape planning, both now on the basis of the tools we have, and in the future on the basis of further new techniques, and this potential, which is a key aspect of OUV, must be respected.</p>	<p>Again, this is incorrect. The HIA clearly notes that some areas of the WHS, including unexcavated portions of monuments and below-ground remains in areas now ploughed flat, “are likely to be largely intact, as evidenced by a variety of non-intrusive techniques (e.g. Gaffney et al. 2012; Amadio and Bishop 2010), and retain great potential for future research” [APP-195, pages 225; 247; 283; 285; 292; 376; 410; 418;424; 440], going on to assess impacts on the fabric and setting of these areas, and assessing the significance of effect of the Scheme.</p> <p>The HIA also acknowledges the “potential of the landscape to reveal more evidence”, citing the SoOUV, “<i>This survival and the huge potential of buried archaeology make the property an extremely important resource for archaeological research, which continues to uncover new evidence and expand our understanding of prehistory</i>” [APP-195, para. 9.1.33] and the second inscription criterion, which notes that “<i>The monuments and landscape have had an unwavering influence on architects, artists, historians and archaeologists, and still retain a huge potential for future research.</i>” [APP-195, para. 12.5.2]. The design, position and inter-relationship of the monuments are indeed evidence of a highly organised prehistoric society able to impose its concepts on the environment: the HIA cites the 2015 WHS Management Plan, noting that sites form part of a “legible part of a cohesive, fossilised prehistoric landscape that contains many</p>



archaeologically significant sites and monuments with complex contextual associations and relationships” [APP-195, pages 225; 298, 312].

The research potential of the WHS is an intangible aspect, addressed in the HIA’s assessment of Impacts and effects of the Scheme on aspects of intangible cultural heritage. The HIA states, “It is not considered that the Scheme would alter the nature, pace or quality of the research that will continue to take place within the WHS.” [APP-195, para. 9.3.75], and “It is anticipated that research in and around the WHS will continue both to influence and to mirror contemporary approaches to social and natural sciences and archaeological theory” [APP-195, para. 9.3.76]. The HIA notes that “The Scheme builds on over 20 years of proposed road schemes and public debate. It is anticipated that public and stakeholder consideration and discussion of this high-profile Scheme may raise awareness, understanding of and interest in both the WHS landscape as a whole, and in the better-known and more widely-visited elements of the WHS, such as the Stonehenge monument and prominent barrow groups.” [APP-195, para. 9.3.79].

The Applicant acknowledges that understanding of the uses and meanings of the WHS landscape is the subject of a constantly evolving debate. The DAMS [TR010025-001951], developed in consultation with members of HMAG and with input from the Scientific Committee, captures current research questions and thinking; the reflexive and iterative nature of the DAMS provides ample scope to address discoveries during the mitigation



programme, and to take account of emerging discoveries, theories and understanding of the uses and development of the WHS landscape.

Wiltshire Council and Historic England consider that the DAMS and its ARA provide an appropriate basis for development of site-specific research questions and SSWSIs. Historic England's closing submission [AS-111] confirms, "We believe that the dDCO, OEMP and DAMS set out a process to ensure that heritage advice and considerations can play an appropriate and important role in the construction, operation and maintenance of the Scheme [...] we consider sufficient safeguards have been built in for the detailed design stage".

The speculative argument that future technology may discover more information is addressed in the Applicant's Comments on Written Representations [REP3-013, para. 21.4.4]. In any case the DAMS deliberately has the flexibility to encompass new techniques if they emerge. Appropriate techniques commensurate with the significance of the relevant heritage assets will be applied at each site or area of archaeological interest. For each intervention, a Site-Specific Written Scheme of Investigation (SSWSI) will set out specific measures that will apply to particular pieces of archaeological fieldwork, to be carried out as part of the programme of archaeological mitigation works. The SSWSIs are required to develop relevant research questions and methodological approaches based on the DAMS, in consultation with Wiltshire Council and Historic England and for sites within the WHS, HMAG, for approval by Wiltshire Council (in consultation

with Historic England). The approval process built into the DAMS will involve confirmation of the acceptability and fitness for purpose of the techniques proposed for each mitigation area.

It is an overstatement to assert that the “new finds” “clearly demonstrate” the matters that ICOMOS-UK claim. The Applicant points the Secretary of State to submissions by Wiltshire Council [TR010025-001968] and the National Trust [TR010025-001975] that question the evidence base for the finds and their interpretation as well as submissions by eminent archaeologists such as Professor Tim Darvill [TR010025-001964] and prehistorian and author Mike Pitts FSA [TR010025-001967]. In any event, the ES and HIA Addenda [TR010025-001979 and TR010025-001980], show that, even assuming that the conclusions of the paper are accurate, the impacts of the Scheme in the main ES [APP-044] and HIA [APP-195], which consider all of the above points, are unaffected.

4.14	<p>3.8 Overall, ICOMOS-UK considers that the new finds reinforce the idea that decisions taken on the basis of limited assessments would harm OUV in terms of damaging links between monuments, sites and areas that could have the potential to deliver in the future profound insights into complex prehistoric planning and the structure of societies.</p>	<p>The Applicant stands by its assessments. The ES [APP-044] and HIA [APP-195] baselines, informed by the Cultural Heritage Setting Assessment [APP-218] and the comprehensive archaeological evaluations [REP1-039 to REP1-056; REP3-023 &amp; REP3-024] have provided sufficient information to assess the impacts of the Scheme, with detailed consideration of the impacts on links between monuments, sites and areas and the landscape of the WHS as a whole.</p> <p>The Applicant has not undertaken “limited assessments”: The archaeological evaluation results, combining geophysical surveys</p>
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with testing by trial excavation, form a robust baseline on which to make assessments of the impacts of the Scheme upon archaeological remains. These are further detailed in the Applicant's overarching response addressing the 'new discovery' responding to Secretary of State letter dated 16 July 2020 [TR010025-001981, section 2]. The robustness of the evaluation strategy is demonstrated by the approval by Wiltshire Council and (for sites within the WHS) HMAG of the AESR, OWSI and individual SSWSIs; and by the monitoring of the implementation of the strategy on site and approval of the resulting evaluation reports [REP1-039 to REP1-056; REP3-023 & REP3-024]. The suitability and comprehensiveness of the evaluation programme were confirmed in evidence by the County Archaeologist, Ms Pomeroy Kellinger on behalf of Wiltshire Council [REP4-030, items 5 (i) and (ii)]. The Applicant stands by its comprehensive and robust evaluations as indicated by Historic England's recent assessment of the Applicant's geophysical surveys in its submission dated 13th August [TR010025-001972].

The Detailed Archaeological Mitigation Strategy (DAMS) [TR010025-001951] provides a robust and flexible iterative strategy for the mitigation of impacts on known and unknown archaeological remains. The Applicant understands that Wiltshire Council and Historic England consider that the DAMS and its ARA provide an appropriate basis for development of site-specific research questions and SSWSIs.

In addition, the National Trust, in their response [TR010025-001975] state: "This reflexive approach, coupled with the promotion of high quality research has the ability to ensure the

archaeological mitigation undertaken as part of the Development responds appropriately to any new information, and discoveries in order to appropriately hone both the creation of SSWSIs, and to allow for further modification in light of additional information that comes to light during the course of fieldwork.” [TR010025-001975, para. 6.1.7].

The Scheme has been carefully and sensitively designed with due regard to the WHS and its OUV and in order to limit impacts to the historic environment. The HIA concludes that overall, the Scheme is assessed to have a Slight Beneficial effect on the OUV of the WHS as a whole. The OUV of the WHS would be sustained as set out in section 12.4 of the HIA [APP-195]. This is further detailed in the Applicant’s response to Written Question CH.1.4 [REP2-025], Comments on Written Representations [REP3-013, paras. 21.2.40–44; 21.2.48–58; 21.4.9–15; 65.3.2–3; 65.3.42–48], and the Applicant’s written summary of its oral submissions from ISH 2 regarding Cultural Heritage [REP4-030] in relation to agenda items 3 and 4, which responds to the points which were made by ICOMOS UK at the hearing; and the Applicant’s oral submissions regarding harm to OUV was put at Cultural heritage, landscape and visual effects and design hearing on 21 August 2019 [REP8-016, paras. 3.1; 3.2].

With regard to future research, please see the Applicant’s response to Points 4.1, 4.6, 4.7, 4.9, 4.10, 4.13 and 4.16.

4.15	3.9 In terms of specifics, the location of the eastern portal and its associated road works could compromise links	With regard to the positioning of the eastern tunnel portal, the removal of the current severance of the Avenue and the re-
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	<p>between the Durrington pit circle and the lower segment of the Avenue, which, although only surmised at this point in time, need to be the subject of further detailed investigations to better understand the relationship between the Avenue and Durrington Walls henge, as well as between the main henge and Durrington Walls henge, as two key focal points of the prehistoric landscape. The proposed eastern intervention can now be seen to have the potential to cause considerable, irreversible harm to the integrity of the globally important Neolithic spatial planning that is beginning to be revealed.</p>	<p>connection of its line across the course of the former A303, please see the Applicant's response to Point 4.7 above.</p> <p>Regarding the suggestion that further detailed investigations are required to better understand the relationship between the Avenue and Durrington Walls henge. The Applicant notes that the 'new discovery' lies to the north of the DCO boundary and it has responded with HIA and ES Addenda [TR010025-001979 and TR010025-001980] that address wider issues of setting and the OUV of the WHS, taking the conclusions of the paper on the 'new discovery' at face value. The Addenda conclude that there were no new Likely Significant Effects and No Change to the overall conclusion of the HIA and the impact from the Scheme on the OUV of the WHS as a whole following the publication of the 'new discovery'. The Applicant concludes that there will be no impact upon the 'new discovery' or its interrelationships and therefore no further investigation is warranted in respect of the Scheme.</p>
4.16	<p>3.10 The massive scale of the new discoveries demonstrates the ineffectiveness of the limited sampling techniques undertaken and proposed for the locations of portals, cuttings and roadworks, which are more suitable to small finds rather than the scale of prehistoric landscape designs such as those just revealed.</p> <p>3.11 The sampling techniques cannot exclude the possibility that parts of major landscaping concepts exist in the areas proposed for development. While the sampling may be able to reveal that there are no barrows or</p>	<p>The Applicant has already set out at length – particularly in its Overarching Submission addressing the 'new discovery' responding to Secretary of State letter dated 16 July 2020 [TR010025-001981, section 2] – how the 'new discoveries' hold no implications for the robustness of its evaluation strategy since, among other things, they provide no evidence of any gaps in that strategy. The draft Archaeological Evaluation Strategy Report (AESR) and its accompanying and Overarching Written Scheme of Investigation (OWSI) (including proposals for extensive geophysical surveys) were developed in consultation with the HMAG with advice from the Scientific Committee (which included</p>



Neolithic pits directly in the impacted areas, (although it has been acknowledged that the western cutting will impact on some burials– although not the dozens estimated by archaeologists), it has not indicated whether and how such sites form part of important spatial patterns or visual links.

a geophysical survey expert and member of the Hidden Landscapes Project, Professor Vince Gaffney) [REP3-013, para. 56.1.65]. The AESR and OWSI were approved by Wiltshire Council and HMAG and guided the development by Highways England of Site Specific Written Schemes of Investigation (SSWSIs): these SSWSIs were approved, and their implementation on site monitored, by Wiltshire Council and, for sites within the WHS, HMAG. HMAG approved the scope, coverage, area and techniques to be employed in the Applicant's Archaeological Evaluation in the WHS – including the resolution and techniques required for the Applicant's geophysical surveys.

As such, the Scheme has been subject to a comprehensive archaeological evaluation programme which provides a robust baseline against which the Scheme impacts on heritage assets have been assessed (in the ES [APP-044]) and the impacts of the Scheme on the Attributes of OUV, Integrity and Authenticity of the WHS have been assessed (in the HIA [APP-195]). The conclusions of the ES and HIA were informed by the results detailed in the evaluation reports [REP1-039 to REP1-056] as well as the previous archaeological work in the WHS. With regard to the evaluation results, the detailed reports [REP1-039 to REP1-056; REP3-023 & REP3-024] set out the results in the context of the WHS and discoveries within its environs. With regard to the evaluation strategy applied, see the Applicant's response to Point 4.9 above.

With regard to “proposed” “limited sampling techniques”, the DAMS [TR010025-001951] provides for site-specific research



questions to be developed with input from specialists and for the iterative development of strategies and field methods on site that respond to the nature and significance of the features encountered, all subject to consultation with and ultimately the approval of key statutory stakeholders. These provisions provide ample scope to address discoveries during the mitigation programme, and to take account of new research within the WHS. The provisions in the DAMS give scope to accommodate a range of approaches, including the latest scientific methods, and the flexibility to take account of emerging discoveries. Heritage consultees – Historic England, Wiltshire Council and the National Trust – have also confirmed in their submissions that the DAMS is fit-for-purpose and that the dDCO, OEMP and DAMS ensure that heritage advice can play an appropriate and important role in relation to the Scheme detailed design [further detailed at Point 4.14 above; TR010025-001968, sections 2.4 & 2.5; AS-111; TR010025-001972; TR010025-001975].

The HIA considers “spatial patterns or visual links”, setting out the spatial context, geology and topography, the chronological context and the historic landscape context of the study area [APP-195, sections 6.2–6.4]. It describes the condition of the whole and of individual Attributes and components, physical characteristics, viewpoints, spatial patterning and contextual associations which may relate to Attributes, as well as the design, position and inter-relationship of the monuments. The HIA draws on a broad evidence base including the results of investigations from both

		<p>academic research and development-led archaeological excavation [APP-195, section 6].</p> <p>With regard to burials in the area of the western portal and approaches, see the Applicant’s response to Point 4.8 above. Individual burials identified in evaluation fieldwork, their relationships and contextual associations are considered and assessed in the main HIA [APP-195, paras. 6.8.17–23; 6.10.34; 9.3.4–8] and the Archaeology Baseline Report [APP-211].</p>
4.17	<p>3.12 It is becoming increasingly clear from the recent Durrington finds that while we may be able to map individual sites at a micro scale, we only beginning to recognise macro scale relationships, such as those revealed by the Hidden Landscapes project. Further surveys, targeted excavations and analysis using all the tools that are now available could greatly increase our understanding of macro forms in the landscape which shifted and changed over time, and, as new tools become available, even more knowledge might be revealed in the future.</p>	<p>With regards to the scales and resolution of the comprehensive programme of archaeological evaluation surveys and how the Applicant has already taken detailed landscape approaches to assessment, please see the Applicant’s response to Points 4.3, 4.6, 4.7, 4.9, 4.10, 4.13 and 4.16 above.</p> <p>Regarding the suggestion that further detailed investigations are required to better understand the landscape, please see response to Points 4.2, 4.3 and 4.6 above.</p> <p>The speculative argument that future technology may discover more information about the WHS is addressed in the Applicant’s Comments on Written Representations [REP3-013, para. 21.4.4], detailed at Point 4.13 above.</p> <p>Future research potential is addressed at Point 4.7 above.</p> <p>As detailed at Point 4.7 above, the Scheme will not prevent future research within the WHS; its mitigation programme will add to archaeological research and knowledge. The DAMS provides a robust, flexible iterative strategy, discussed with and approved by</p>



stakeholders [see Point 1.14 above], for the mitigation of impacts on both known and presently unknown archaeological remains. The reflexive and iterative nature of the DAMS provides ample scope to address discoveries during the mitigation programme, and to take account of emerging discoveries, theories and understanding of the uses and development of the WHS landscape. Appropriate techniques commensurate with the significance of the relevant heritage assets will be applied at each site or area of archaeological interest. The approval process built into the DAMS will involve confirmation of the acceptability and fitness for purpose of the techniques proposed for each mitigation area. These mitigation measures will make a significant contribution to the investigation of the spatial and chronological development of the WHS and thus, to transmitting understanding of its OUV and furthering the public appreciation of the WHS.

4.18

3.13 Given this, it is clear that the outcomes of the HIA, which was based on limited knowledge as well as limited application of that knowledge, cannot be said to provide a sound judgment to support the idea that certain areas of the WHS have no attributes that contribute to OUV, and that destroying such areas would not compromise the integrity of the WHS, or that the obligation to protect the landscape as a resource for future generations has somehow been fulfilled by the limited surveys so far undertaken – and which have not even been released into the public domain.

The Applicant stands by its evaluation surveys and the assessments undertaken which have been thorough and robust; this is set out in the Applicant’s overarching response addressing the ‘new discovery’ responding to Secretary of State letter dated 16 July 2020 [TR010025-001981]. The Applicant disagrees that the main HIA was based on “limited knowledge” or a “limited application of that knowledge”. The Scheme has been the subject of an unprecedented level of detail of investigation of the area of the WHS covered by the Scheme in accordance with an archaeological evaluation strategy developed in consultation with HMAG and with input from the Scientific Committee. This has comprised up-to-date geophysical survey of the full area within the

DCO boundary, ploughzone artefact sampling across all areas evaluated, and trial trenching, building on and augmenting the results of more than 25 years of previous investigations in connection with the A303, and taking into account the emerging results of academic research programmes undertaken over the last decade. This provides us with a robust baseline to assess the Scheme impacts and assess Scheme risks. The Scheme has been designed to avoid known archaeological assets wherever possible and minimise land-take within the WHS. This evidence informed the assessment that has been undertaken in the HIA.

The protection of the “landscape as a resource for future generations” is addressed at Points 4.3, 4.6 and 4.10 and future research potential, at Point 4.7. The archaeological investigation and documentation proposed in the DAMS [TR010025-001951], which would need to be adhered to in compliance with the DCO (if granted), is directed at addressing research questions, and will only investigate areas impacted by the Scheme; other areas will be protected and preserved in situ. These excavations will be undertaken in accordance with agreed international and national professional standards.

The HIA has been carried out accurately in compliance with the Guidance on Heritage Impact Assessments for Cultural World Heritage Properties adopted by the International Council on Monuments and Sites (ICOMOS 2011) and with a full appreciation and understanding of the importance of the WHS and its OUV including the Integrity, Authenticity and the Attributes that convey OUV. The Scheme avoids known funerary and ceremonial



monuments and has been designed to minimise land-take and the loss of archaeological remains within the WHS. The loss of archaeological remains has been taken into account in arriving at the assessment of harm to the attributes of OUV [REP7-021, para. 6.3.2; REP8-016, para. 3.3]. The HIA was carried out in accordance with the methodology set out in the HIA Scoping Report, which was endorsed by the Heritage Monitoring and Advisory Group and the UNESCO/ICOMOS Mission in 2018 [APP-195, section 3.3, paras. 3.3.4–3.3.6 and REP1-008, section 5.6]. The thoroughness of the HIA is acknowledged by Historic England [TR010025-001972].

All of the archaeological evaluation survey results and reports undertaken by the Applicant have been released into the public domain. Early geophysical survey and trial trench evaluation reports are available on the website of the [A303 Scientific Committee](#), with further survey reporting published as part of the public examination library at Deadline 1 [REP1-039 to REP1-056]. Two further reports, a palaeoenvironmental assessment, and a review of ploughzone lithics and tree hollow distributions, were submitted at Deadline 3 [REP3-023 & REP3-024].

With regard to future reporting, the DAMS [TR010025-001951] requires that a comprehensive publication and dissemination programme be developed in parallel with the strategy for Public Archaeology and Community Engagement (Appendix E), to deliver a lasting legacy from the archaeological investigation and recording works undertaken for the Scheme. The publication and dissemination programme will be developed in consultation with

the Heritage Monitoring and Advisory Group (HMAG) and the public archaeology strategy will link to the work of Highways England's A303 Benefits and Legacy Forum and Benefits Steering Group, which will look to work with partner organisations to develop the Scheme legacy and benefits as the Scheme develops, tying in to the priorities set out within the 2015 WHS Management Plan [TR010025-001951, section 9.2, Outline Publication and Dissemination Proposals, and DAMS Appendix E, Public Archaeology and Community Engagement Strategy].



## 5 Simon Banton

	Matter Raised	Highways England's Response
5.1	<p>Over the past 40 years there has been a growing realisation amongst archaeologists and others that ancient people did not think in terms of isolated monuments, but rather that the whole landscape was significant.</p>	<p>The Applicant agrees with Simon Banton's comment and has undertaken its Heritage Impact Assessment (HIA) [APP-195] thoroughly and professionally. The Applicant points to its response to ICOMOS UK [at REP7-021, para. 31.1.2] with regards to the methodological approach to the HIA and that it has not taken an approach that solely assesses impacts on isolated monuments. The HIA [APP-195] deals with inter-relationships between assets and Asset Groups and looks at the wider impacts of the Scheme upon the Attributes (four of which encompass elements of landscape (Attributes 3, 4, 5 and 6)), Integrity and Authenticity that convey the OUV of the WHS as a whole.</p> <p>It should be noted that in doing so the Applicant has followed the appropriate guidance in undertaking its HIA (ICOMOS 2011) and the HIA Scoping Report was endorsed as appropriate by the UNESCO/ICOMOS Mission 2018 and approved by HMAG (that includes Historic England, Wiltshire Council, the National Trust and English Heritage). The HIA Scoping Report and its approach was approved by HMAG (including Historic England, Wiltshire Council, the National Trust and English Heritage). Historic England also noted that the HIA was thorough and broadly concurred with the assessment in the HIA in its application of the ICOMOS 2011 guidelines [TR010025-001972] and the overall</p>

		<p>assessment conclusions. In particular, Historic England stated in that submission (para 2.4.10):</p> <p>"We consider that the assessments conducted under the Scheme were sufficiently rigorous to inform determination of the Scheme and development of an appropriate and proportionate archaeological mitigation strategy. The recently published research does not change our view of those assessments."</p> <p>With regard to the effect of the Scheme on the WHS as a whole, we would also refer the Secretary of State to the Applicant's response to the Examining Authority's Written Question CH.1.4 [REP2-025, pages 5-10 to 5-11].</p> <p>Cultural Heritage Design Commitments are set out in the Outline Environmental Management Plan (OEMP) [TR010025-001949, table 3.2b]. These include specific design parameters related to road geometry and scale, land-take, lighting, signage, boundary fencing and gates to ensure that the Scheme is visually recessive and sympathetically integrated within the WHS. Design Principles are also set out in the OEMP [TR010025-001949, chapter 4 and table 4].</p>
5.2	<p>Certain places, views, walks and features acquired and retained a "specialness" that was fundamental to their sense of belonging. Whether commemorated in a deliberately planned series of activities to mark out a specific aspect, or through a gradual enhancement of one spot or another, the end result is an integrated whole.</p>	<p>The Cultural Heritage Setting Assessment [APP-218, pages 66–67] and the HIA [APP-195, pages 343–356], submitted by the Applicant with the DCO Application states the following in relation to the Avenue:</p> <p><i>"Setting makes a high contribution to the significance of the group and its component elements. The Avenue is not a greatly upstanding monument, nor one that is readily discernible or particularly legible at ground level... Nevertheless, it presents a</i></p>



<p>The view that is consistently and cleverly framed for walkers along the Avenue indicates an outstanding aesthetic sense and a desire to undertake "landscape engineering" on an epic scale. It shows an interconnectedness not only in space but also through immense spans of time, reinforcing a people's relationship with the land and their past.</p> <p>The route of the Avenue has been a subject of controversy for a long time. It's not the easiest stone-transport route from the Avon to Stonehenge, but seems instead to have been designed (at the depths of the valley at Stonehenge Bottom) to induce a sense of expectation prior to the final approach along the solstice axis to Stonehenge. Indeed, at that final turn (the "Elbow"), Stonehenge disappears from view entirely, only re-emerging as you climb the slope towards the setting winter sun in a grand final "reveal".</p> <p>The part of the Avenue route leading from the Avon to King Barrow Ridge now seems to me to have its own crucial significance - keeping in clear view all the parts of the eastern horizon that have a meaning to those undertaking the journey.</p> <p>Perhaps, given the idea that the Avenue was part of a ritualised movement from life to death from Durrington Walls to Stonehenge, this sharp focus on a particular sweep of the eastern horizon served as an act of remembrance of all those who have gone before.</p>	<p><i>coherent linear feature for much of its original extent, whose significance derives in large part from its setting. This exists both in terms of physical relationships with the landscape through which it passes, and dynamic (changing) visual interconnections with the prehistoric ceremonial and funerary monuments along its route. Of particular importance in this regard is the continued legibility of the relationship between the Avenue and Stonehenge. Its linear character also makes it a means of traversing the remains of the late prehistoric landscape which (depending on which interpretation of its function one accepts) may replicate ancient itineraries. The sections of the Avenue from which these relationships can most readily be appreciated lie within the open access portion of the WHS [to the west of King Barrow ridge]. In the more fragmented southern part, where surrounding monuments generally have less surface expression, these associations are far less evident."</i></p> <p>The Applicant therefore agrees with Simon Banton that certain views, traverses and movements through the landscape, such as along the Avenue, are fundamental to the understanding the Avenue's significance.</p> <p>As noted in the Applicant's response to the Stonehenge Alliance [REP7-021 para. 6.4.15] "the existing A303 currently severs the Avenue just to the east of King Barrow Ridge and has a Large Adverse effect on this scheduled monument. In comparison the Scheme will result in a Large Beneficial effect on the Avenue [see the HIA, APP-195; pages 354–356] through the removal of the existing severance caused by the current A303, the removal of much of the existing aural and visual intrusion of traffic on the A303, the restoration of the physical connectivity along much of</p>
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<p>And those pits don't even have to be visible for that to happen - just an understanding that they are there and that they are positioned to induce this feeling would be enough.</p> <p>The proposed location for the Eastern Portal and the dual carriageway approach to it, along with embankment cuttings and ancillary fencing, will destroy this vista.</p> <p>It will sever, both metaphorically and actually, the links between peoples and this landscape that have persisted for at least 10,000 years.</p>	<p>this important prehistoric ceremonial route, and improvements to the integrity and setting of the monument.”</p> <p>The eastern portal will be constructed within the base of a dry valley, to the east of the Avenue, and the tunnel portal concealed with a grassed canopy. The existing surface dual carriageway will be removed and will be grassed over including where the Avenue is currently severed by the existing A303 surface road. This will allow safe crossing of the Avenue at this point and the potential future reconnection of it as a processional route. The setting of the Avenue following the construction of the Scheme will therefore be improved. The impact of the Scheme on the setting of the ‘new discoveries’, suggested to form a ‘monumental structure’ – which are composed of large buried geophysical anomalies with no surface expression – is assessed in the HIA Addendum [TR010025-001980, section 6]. The use of the retained cutting, the canopy and the positioning of the portal in a dry valley in the landscape will limit the impacts to the setting and therefore the low contribution this makes to the significance of the ‘southern arc’ of anomalies. The Scheme will not entail the severance of any stated relationships. A Neutral effect is assessed for the ‘new discovery’, derived from No Change to potentially Very High value assets.</p> <p>The Applicant therefore disagrees with Mr Banton’s assertions, based on thorough and professional analysis by the Applicant of the effects of the Scheme. The removal of the existing A303 surface dual carriageway and its aural, visual and traffic (including current severance) and the hiding of the eastern portal in a dry valley under a grassed canopy will improve the setting of the</p>
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		<p>Avenue and its visual, topographical and contextual relationships to other monuments. This includes the 'new discoveries', situated to the north-east and views from the Avenue, towards the features and the eastern horizon.</p>
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## 6 Simon Bradley

	Matter Raised	Highways England's Response
6.1	<p>The latest discoveries at Stonehenge make it more important than ever that this globally important site be preserved with as much care as possible. This in turn clearly rules out the proposed new roadworks there. There is no need to elaborate further.</p>	<p>The Applicant disagrees with Dr Simon Bradley's view that the Scheme must be ruled out. The Scheme has been designed sensitively and carefully to reduce the impacts of the road on the Stonehenge element of the Stonehenge, Avebury and Associated Sites World Heritage property. Heritage has been a key consideration during route selection and consultation, supporting the Scheme's objective to help conserve and enhance the WHS.</p> <p>The removal of the existing A303 vehicular traffic and surface road from the World Heritage Site (WHS) landscape will result in extensive benefits for the WHS including beneficial effects to many heritage assets within the WHS. The cultural heritage assessment for the Scheme can be found in the Environmental Statement (ES), Chapter 6 [APP-044] which reports the Likely Significant Effects on the historic environment from the construction and operation of the Scheme. Detailed consideration of the assessment of the Scheme in the context of the OUV of the WHS can be found in ES Appendix 6.1, Heritage Impact Assessment (HIA) [APP-195] and concludes that the Scheme will have a Slight Beneficial effect on the OUV of the WHS as a whole and the OUV of the WHS would be sustained. In relation to the 'new discoveries' published in the 2020 Gaffney et al. Paper, the Applicant has undertaken Addenda to the ES and the HIA [TR010025-001979 and TR010025-001980]. The HIA Addendum [TR010025-001980] demonstrates that the effect of the Scheme</p>



		<p>on the WHS as a whole, the Attributes of OUV, its Integrity and Authenticity, as assessed in the HIA [APP-195], submitted with the application, remains unchanged following the discovery. The ES Addendum [TR010025-001979] has not identified any new Likely Significant Effects beyond those already identified in the ES [APP-044] submitted with the Application.</p>
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## 7 Stonehenge Alliance

	Matter Raised	Highways England's Response
7.1	<p>1.1 Full understanding of the Durrington pits feature and its relationship(s) to other archaeological monuments and sites in the WHS has not been reached: further investigation is needed over time. This major find is associated with one of the key upstanding monuments in the WHS. It also appears to be associated with the much earlier Larkhill causewayed enclosure and, possibly, with other sub-surface archaeological features, both known and unknown.</p>	<p>The Applicant has assessed the significance of the 'new discovery', including its stated relationships with other archaeological and natural features in the wider landscape, taking the conclusions of the Hidden Landscapes Report at face value. The Applicant submitted Addenda to the ES [TR010025-001979] and HIA [TR010025-001980] to the Secretary of State on 13th August which considered the Scheme's impact upon the 'new discovery' and its stated interrelationships. The Likely Significant Effects of the Scheme, as reported in the ES [APP-044], and the conclusions of the HIA [APP-195] do not change following the publication of the 'new discovery'.</p> <p>Further investigation is not needed, due to the conclusions of the above Addenda on the lack of impacts of the Scheme upon the 'new discovery' and the interrelated sites and areas proposed in the published paper. The suggested discrete large pit-like anomalies across the landscape outside of the Scheme boundary will not be physically impacted by the Scheme: those that lie within the Scheme boundary will either be protected and retained in situ, or archaeologically excavated and recorded. The HIA Addendum [TR010025-001980] assesses the impacts and effects of the Scheme on the Attributes of OUV, Integrity and Authenticity of the World Heritage Site (WHS). This HIA Addendum includes assessment of the setting and relationships between the monuments, addressing the stated links to other monuments in the Stonehenge landscape asserted in the 2020 Hidden</p>



Landscapes Project paper (including the Larkhill Causewayed Enclosure, TR010025-001980, paras. 3.3.12–19).

Associations between monuments, areas and sites in the Stonehenge landscape have been, and continue to be, subject to a wide range of disparate theories, speculations and interpretations which have competed, changed and in turn inspired further hypotheses over the course of hundreds of years. This very aspect gives rise to the seventh Attribute of OUV of the WHS: 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.

A comprehensive and robust evaluation programme has been undertaken and known sub-surface archaeological features are addressed in the main ES [APP-044] and main HIA [APP-195]. The suitability and comprehensiveness of the evaluation programme were confirmed in oral submissions put at Cultural Heritage hearings on 5 and 6 June 2019 by the County Archaeologist, Ms Pomeroy Kellinger on behalf of Wiltshire Council [REP4- 030, items 5 (i) and (ii)].

The Detailed Archaeological Mitigation Strategy (DAMS) [TR010025-001951] provides a comprehensive strategy for the mitigation of impacts on known and unknown archaeological remains. The scope of the DAMS provides for site-specific research questions to be developed with input from specialists, for natural features containing cultural material to be fully excavated, and for the iterative development of strategies on site that respond to the nature and significance of the features encountered. These provisions provide ample scope to address discoveries during the

		<p>mitigation programme, and to take account of new research within the WHS.</p> <p>It is assessed that the Scheme will not impact on the ‘new discovery’ or the sites and areas which the Hidden Landscapes Project theorises may be associated with it. The ES and HIA assess impacts on known and likely heritage assets for which there is archaeological evidence based on previous studies, comprehensive field surveys and ground truthing; the DAMS provides a robust, flexible iterative strategy for the mitigation of impacts on both known and presently unknown archaeological remains.</p> <p>In light of all of this, it is clear that no further investigation is needed.</p>
7.2	<p>1.2.4 ...present-day technology now allows evocative demonstration of the interconnectedness of archaeological features of the WHS both with one another and with the landscape as one moves through it. Future advances in technology, knowledge and understanding could allow even greater appreciation and comprehension of the WHS landscape, its uses and development.</p>	<p>The Applicant acknowledges that understanding of the uses and meanings of the WHS landscape is the subject of constantly evolving debate. The DAMS [TR010025-001951], developed in consultation with members of HMAG and with input from the Scientific Committee, captures current research questions and thinking; also the reflexive and iterative nature of the DAMS provides ample scope to address discoveries during the mitigation programme, and to take account of emerging discoveries, theories and understanding of the uses and development of the WHS landscape.</p> <p>Wiltshire Council and Historic England consider that the DAMS and its ARA provide an appropriate basis for development of site-specific research questions and SSWSIs. Historic England’s closing submission [AS-111] confirms, “We believe that the dDCO, OEMP and DAMS set out a process to ensure that heritage advice and considerations can play an appropriate and important role in</p>



<p>the construction, operation and maintenance of the Scheme [...] we consider sufficient safeguards have been built in for the detailed design stage”.</p> <p>The speculative argument that future technology may discover more information about the WHS is addressed in the Applicant's Comments on Written Representations [REP3-013, para. 21.4.4], noting “This is particularly the case having regard to the comprehensiveness of the assessment undertaken and the mitigation measures in place in the Detailed Archaeological Mitigation Strategy (DAMS) [REP2-038]. The application documents, in particular the Case for the Scheme [APP-294], have set out the need for the Scheme; it is neither appropriate nor a feasible approach to delay or prevent a development on the basis that there could potentially be better technologies in future. Taking that approach, no infrastructure would ever be delivered, despite the need for it. In any event, were future technologies to be developed, the Applicant has built into the Scheme via the DAMS the ability to allow for archaeological remains that are excavated as part of the Scheme works to be preserved in anticipation of further analysis”. Appropriate techniques commensurate with the significance of the relevant heritage assets will be applied at each site or area of archaeological interest. For each intervention, a Site-Specific Written Scheme of Investigation (SSWSI) will set out specific measures that will apply to particular pieces of archaeological fieldwork, to be carried out as part of the programme of archaeological mitigation works. The SSWSIs are required to develop relevant research questions and methodological approaches based on the DAMS, in consultation with Wiltshire Council and Historic England and for sites within the WHS, HMAG, for approval by Wiltshire Council (in consultation with Historic England). The approval process built into the DAMS</p>
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		<p>will involve confirmation of the acceptability and fitness for purpose of the techniques proposed for each mitigation area.</p>
7.3	<p>1.2.4 The imposition of major new road engineering and tunnel portals would further damage the setting of the Avenue and the eastern approaches to Stonehenge in an area which, because of the new discovery, has become a focus of particular interest.</p>	<p>The Scheme as originally assessed does not “damage the setting of the Avenue and the eastern approaches”; quite the opposite. The tunnelled element of the Scheme, in combination with the decommissioning of the current A303, creates the opportunity to reconnect the northern and southern parts of the WHS and the many monuments and monument groups that contribute to the OUV of the WHS that are currently severed and separated by the road. This includes facilitating the reconnection of The Avenue where it is currently severed by the existing A303. The tunnel was extended (during Stage 2 of the design) to avoid the Avenue scheduled monument (NHLE 1010140), and the design was further optimised in Stage 3 with an 85m long grassed canopy over the eastern portal to further extend the tunnel, conceal the tunnel entrance in views from the Avenue and to aid landscape integration [REP2-025, Question CH.1.44; REP3-013, para. 12.1.5].</p> <p>The assessment of the Scheme in the main ES and the main HIA is clear that the Scheme will not <i>‘further damage the setting of the Avenue and the eastern approaches to Stonehenge’</i>. The Avenue, including its setting and how movement / traversing along it contributes to its significance, is carefully considered in both the setting assessment [APP-218, pages 66–68] and the HIA [APP-195, pages 354–356]. The eastern portal and approaches will be located in an area that has been shown to have limited archaeological remains within its footprint. Further information can be found in the Assessment of Alternatives, ES Chapter 3 [APP-041] and in ES Chapter 6, Cultural Heritage [APP-044, Section 6.8, Table 6.9]. The eastern portal location would be concealed</p>



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. The positioning of the eastern tunnel portal, the removal of the current severance of the Avenue and the re-connection of its line across the course of the former A303, the removal of much of the existing aural and visual intrusion of traffic on the A303 and improvements to the integrity and setting of the monument are assessed as resulting in a Large Beneficial effect on AG27 the Avenue in the HIA [APP-195, para. 9.3.68] and a permanent large beneficial effect in the ES [APP-044, table 6.11]. The portal's position to the east of the Avenue allowing for the reinstatement of its route aligns well with policy 3e of the 2015 WHS Management Plan [REP3-013, paras. 24.2.21–23].

The Addenda to the ES [TR010025-001979] and HIA [TR010025-001980] confirm that the 'new discovery' results in no changes to the effects as originally assessed. The impacts of the Scheme on the 'new discoveries' have been assessed in those documents submitted to the Secretary of State on 13th August, and remain as previously reported. As with the Main ES [APP-044] and Main HIA [APP-195], these Addenda continue to consider theories regarding the arrangements of monuments and spaces, relationships between sites and areas, potential 'processional activities' and the concept of 'imbued boundaries'. The Stonehenge Avenue appears to have provided a formal approach to Stonehenge, linking it with the River Avon at West Amesbury and the West Amesbury Henge. Recognising its significance, the Eastern Portal has been positioned east of the Avenue to enable the reconnection of the Avenue.

The area has not, then, become a focus of particular interest as far as the impacts of the Scheme is concerned following the 'new



		discovery'. The impacts remain the same as they were prior to the publication of the 2020 SHLP Paper.
7.4	<p>1.3.1 The location of the new find emphasizes the importance of protecting the WHS' setting. Measures to protect the setting have, unfortunately, not been adequately undertaken in recent years, leaving only the southern and parts of the western settings of the WHS least affected by modern built development.</p> <p>1.3.2 Nowadays, buffer zones are required at designation where necessary for the protection of a WHS property. [8] Owing to its early designation, the Stonehenge WHS lacks a buffer zone. However, in addition to the safeguards for protection of the WHS and its setting in Local Plan policy, a setting study will be undertaken as an agreed WHS Management Plan policy.</p> <p><i>“The Wiltshire Core Strategy includes a specific robust policy relating to the Stonehenge and Avebury World Heritage Site. Policy 59 sets out to ensure the protection of the WHS and its setting from inappropriate development in order to sustain its OUV. The policy highlights the need to produce supplementary planning guidance – possibly a Supplementary Planning Document (SPD) – to assist in articulating the spatial implications of the attributes of OUV. ([Management Plan] <b>Policy 1b/Action 4</b>) It also underlines the need to protect the setting of the WHS to sustain the OUV and</i></p>	<p>With regard to the effects of “modern built development” on the setting, the Applicant has previously noted that “It is through the planning system that changes to buildings and land in England is managed. The planning system guides decisions on proposed changes to historic buildings and places, including those which are protected. Decisions regarding commercial / residential developments and the army rebasing programme, to the north and east of the WHS, and whether these should be granted planning permission or not are a matter for Wiltshire Council, and in relation to designated heritage assets of the highest significance (such as the WHS), Historic England will provide their advice to the Local Planning Authority. These developments are granted planning permission with archaeological planning conditions that require archaeological mitigation in advance of construction. The sites are therefore not ‘sterilised’ but are archaeologically recorded to high standards in advance of construction. That material, once published, is then available for reanalysis, re-interrogation and re-interpretation once the archive has been assembled and deposited with a Museum.” [REP5-003, para. 34.1.22].</p> <p>With regard to setting and buffer zones, the Scheme has considered the setting of the WHS. The Relevant Representations Report [AS-026, 11-26 to 11-27] notes that “The WHS inscription sets the boundaries of the site. Any change in the boundaries would be a matter for agreement with UNESCO. While this is outside the scope of the Scheme, the archaeological assessment has carefully considered the archaeology along the full length of the Scheme, whether inside or outside the current WHS boundaries.” As noted in the HIA, “The statement on Integrity</p>



<p><i>highlights the need for a Setting Study.</i> ([Management Plan] <b>Policy 2b/Action 15</b>).” [9]</p> <p>1.3.3 A WHS boundary review may also be undertaken at some future time. [10] [S. Simmonds, and Thomas, B., Stonehenge, Avebury and Associated Sites Management Plan, 2015, pp.92–3  <a href="http://www.stonehengeandaveburywhs.org/assets/2015-MANAGEMENT-PLAN_LOW-RES.pdf">http://www.stonehengeandaveburywhs.org/assets/2015-MANAGEMENT-PLAN_LOW-RES.pdf</a>]</p>	<p>contained within the SoOUV states that the ‘Provision of buffer zones or planning guidance based on a comprehensive setting study should be considered to protect the setting of both individual monuments and the overall setting of the property’. Although these measures have been considered on several occasions (Simmonds and Thomas 2015), no formal setting study or dedicated guidance has yet been prepared, and no buffer zones have been established.” “. A separate setting study [was], therefore, [...] undertaken to inform the HIA.” [APP-195, para. 5.3.17; Appendix 6.9 - Cultural Heritage Setting Assessment, APP-218].</p> <p>With regard to the WHS setting study and the boundary review, these issues were addressed by Department for Digital, Cultural, Media and Sport, Wiltshire Council and Historic England during oral submissions put at Cultural Heritage hearings on 5th and 6th June 2019 [REP4-030]. Wiltshire Council noted that the boundary review was on hold, pending completion of the setting study. Historic England explained that any modification to the WHS boundary (or provision of a buffer zone) would be a lengthy and complex process; any modification to the boundary proposed as a result of the work of Wiltshire Council would then need approval by DCMS and then the World Heritage Committee [REP4-030, item 3.v].</p> <p>In preparing the application, including its HIA, the Applicant has carefully considered the historical development and planning context of the WHS. The assessment area for the Applicant’s HIA takes this context into consideration, noting that it “comprises the whole of the Stonehenge part of the Stonehenge, Avebury and Associated Sites WHS and its setting” [APP-195, Section 5.10]. The HIA acknowledges that “the effects of the Scheme may extend beyond the boundaries of the Stonehenge part of the WHS.” [APP-195, para. 5.10.2]. The HIA takes into account the</p>
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draft minor boundary review [APP-195, para. 5.10.4] and considers impacts upon both sites located within the current WHS boundary, and physically related archaeological features that contribute to OUV located outside the current boundary. This is further addressed in the Applicant's Comments on Written Representations [REP3-013, paras. 21.4.87–92; 65.1.2; 65.1.5; 68.3.8–9], during oral submissions put at Cultural Heritage hearings on 5th and 6th June 2019 [REP4-030, page 2-4] and in the Relevant Representations Report [AS-026, pages 11-26 to 11-27].

Further, the design process has involved extensive consideration of issues of heritage and the setting of heritage assets, which have influenced the design of the Scheme. The Scheme incorporates measures built in to the Scheme to minimise impacts and to enhance the setting of heritage assets, such as the removal of the current A303 into a tunnel across much of the WHS, the downgrading of the current A303 and parts of the A360 to a restricted byway for NMUs and the planting of large areas of chalk grassland. The Scheme also allows the reconnection of the severed route of the Avenue where it is crossed by the current A303. Measures to minimise the physical impact of the Scheme itself, and to conserve or enhance the permanent setting of heritage assets have also been embedded in the design. These include reducing the scheme land-take and the visual intrusion of new highway sections within the WHS; locating the tunnel portals to avoid key heritage assets; green bridges to reduce visual impact and maintain or enhance landscape connectivity; design of lighting and road signage for minimal impact; decommissioning of the A303, surface treatment and conversion of the remaining width to chalk grassland. The need to protect heritage assets and their settings has also been taken into account in the development of the Environmental Masterplan, including ecological and landscape



		<p>mitigation proposals [APP-195, section 8.2, iterative design and embedded mitigation].</p> <p>The Applicant has therefore already considered the impact of the Scheme on the OUV of the WHS as a whole, including its setting, in the main HIA [APP-195] and the HIA addendum submitted to the Secretary of State on 13th August [TR010025-001980], as well as the ES [APP-044] and the Addendum to the ES [TR010025-001979]. These Addenda conclude that even if the conclusions regarding the ‘new discoveries’ are correct, there is no change to the assessment of the ES or the HIA on likely significant effects or impacts on the WHS as a whole respectively. Further information on the Applicant’s previous responses related to the issue of the WHS boundary revision are set out at Point 7.5 below.</p>
7.5	<p>1.3.4 Among other recognized monuments and sites associated with the archaeology of the WHS and located partially athwart or not far beyond the WHS boundary are, by Longbarrow Roundabout, two scheduled monuments: a linear feature and a Bronze Age enclosure. It would obviously be advantageous to protect the setting of the WHS here – to extend the boundary westwards to include and eventually restore the settings of these features as well as other important archaeological monuments and remains at this sensitive location – but this would be impossible were the proposed Development to go ahead. Major new discoveries in the NE corner of the WHS and beyond it are now compromised by built development: an unfortunate example of recent neglect of Government’s policy commitments to protect the WHS’ setting. This should lend weight to rejection of the proposed A303</p>	<p>The impacts of the Scheme on the two scheduled monuments have been carefully assessed in the ES [APP-044] and HIA [APP-195]. The enclosure expresses attributes of OUV, and although located outside the WHS boundary, is assessed as a site of Very High value associated with the WHS [APP-195, 5.10.26]. The linear feature dates to the late Bronze Age and therefore does not contribute to expressing attributes of OUV of the WHS, but is assessed in the ES rather than the HIA [APP-211, para. 3.6.5; APP-195, paras. 5.10.29; 6.8.15]. The Applicant has concluded slight beneficial effect to the enclosure (as a result of removal of roundabout and rerouting the A303 to remove its current severance of the site) [APP-195, page 452] and slight adverse and therefore not significant effect to the linear feature [APP-217, table 1.2 ], all in the context of an overall slight beneficial and sustaining of the OUV. This and the assessment of effects of the western end of the Scheme more generally set out below means that there is no “highly adverse” impact “on the western setting of the WHS and its known and unknown archaeology” and no weight should be put</p>



	<p>Scheme owing to the highly adverse impact it would have on the western setting of the WHS and its known and unknown archaeology.</p>	<p>on arguments that the Scheme should be rejected as a result of impacts on the WHS’s western setting. Moreover, given the beneficial or limited adverse effects of the Scheme on the assets to the west of the WHS set out above, it is not considered that the Scheme would impact upon the potential to revise the WHS boundary to extend west of the A360. The area has been subject to comprehensive geophysical evaluation, ploughzone artefact sampling, trial trench evaluation and palaeoenvironmental assessment [REP1-042; REP1-043; REP1-045; REP1-046; REP1-056; REP3-023; REP3-024], limiting the risk of “unknown archaeology”. The Detailed Archaeological Mitigation Strategy (DAMS) [TR010025-001951] provides a comprehensive strategy for the mitigation of impacts on known archaeological remains that allows a flexible and iterative response as the work proceeds, and includes a strategy for unexpected discoveries [TR010025-001951, paras. 6.1.19–21; 6.5.8].</p> <p>The Applicant has previously addressed assets and asset groups in the vicinity of the current Longbarrow Roundabout at the issue specific hearings, as recorded in its written summary of oral submissions in relation to agenda item 6 from ISH2 regarding ES Chapter 6 [REP4-030, item 6]. The results of the evaluation work undertaken in the area of the western portal and approaches are presented in previous reports submitted to the examination [REP1-045, REP1-046 and REP3-023]. These matters were further considered in the Applicant's Comments on Any Further Information received at deadline 4 [REP5-003, pages 34-231 to 34-235]. The Applicant has responded to Stonehenge Alliance regarding the scheduled Bronze Age enclosure and bowl barrow 100m west of Longbarrow Crossroads on Winterbourne Stoke Down (scheduled monument 1011048) in Comments on Written Representations by [REP3-013, paras. 12.3.125; 12.3.127–8] and</p>
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Comments on any further information requested by the ExA and received at Deadline 4 [REP5-003, 11.2.35].

The locations of the tunnel portals have been identified as the optimum locations when all environmental, technical and economic considerations are taken into account. Further detailed consideration of a western extension to the tunnel is set out in paragraphs 3.3.42 – 3.3.50 in ES Chapter 3 [APP-041], in the Applicant's response to written questions AL.1.25, 1.26, 1.29 [REP2-024] and in the Applicant's previous response to Stonehenge Alliance in its Comments on Written Representations [REP3-013, para. 12.2.18].

With regard to a boundary review, the Applicant has already considered the impact of the Scheme on assets outside of the WHS in the ES and HIA and concluded an overall slight beneficial effect of the Scheme on the WHS and sustaining of the OUV. The Applicant has previously addressed this in more detail in its Response to Written Questions CH.1.58 [REP2-025] and in its Comments on Written Representations [REP3-013], including its response to the Stonehenge Alliance [REP3-013, para. 12.3.95] and the Council for British Archaeology [REP3-013, paras. 21.4.87–92], ICOMOS [REP3-013, paras. 65.1.2; 65.1.5] and R P Bartosz [REP3-013, paras. 68.3.8–9]. Regarding the wider question of harm to the OUV from effects outside the boundaries of the World Heritage Site, the Applicant has previously responded to this in its response to second Written Question LV.2.1 [REP6-030], which respect to Longbarrow Junction (in particular responses to parts (vi) and (vii)) and to its response to first written question CH.1.58 [REP2-025], noted in the in relation to agenda item 3.3.iii in the Written summary of oral submissions put at Cultural heritage, landscape and visual effects and design hearing on 21 August 2019 [REP8-016, item 3.3.iii].

		<p>The Applicant has taken very seriously its duty to identify those Asset Groups that may contribute to the OUV of the WHS that sit either partially outside or wholly outside the existing boundary of the WHS, reflected in the assessment area used in the HIA [see APP-195, section 5.10]. These were identified at an early stage and confirmed, in consultation with the Heritage Monitoring and Advisory Group (HMAG) and the Stonehenge and Avebury WHS Coordination Unit, in order to consider the impacts of the Scheme on them. Given the effects of the Scheme on the assets to the west of the WHS set out above, it is not considered that the Scheme would impact upon the potential to revise the WHS boundary to extend west of the A360.</p> <p>Of the assets mooted for potential inclusion in the 2012 boundary review, detailed in the HIA [APP-195, para. 5.10.4], the scheduled barrows and enclosure at Longbarrow Crossroads (NHLE 1011048) is noted as contributing to OUV. Visual intrusion has been minimised by the western portal's careful positioning and design and the addition of a grassed-over canopy. The proposals include the <i>removal</i> of the existing Longbarrow Roundabout from the WHS. The scheduled site is currently severed by the current course of the A303, which will be re-routed, <i>removing this severance</i> [REP3-013, paras. 12.3.95; 21.4.87–92; 65.1.5; 68.3.9].</p> <p>The Scheme has been sensitively and carefully designed with regards to its context within the WHS and its OUV [REP3-013, 22.1.54; 47.1.4; 52.1.10–12].</p>
7.6	1.4.1 The Stonehenge Alliance, in its representations on the known and unknown geological, hydrogeological and geotechnical aspects of the WHS, has referred to the presence of sinkholes in archaeological contexts in evidence to the Examination, largely in relation to the	The Applicant has previously addressed geological, hydrogeological and geotechnical aspects of the WHS in its response to Written Question Fg.1.5 [REP2-031] and at the issue specific hearings, as recorded in its written summary of oral



<p>possibility of ground movement and subsequent archaeological damage arising from tunnel boring. [11: Inter alia, Stonehenge Alliance, REP2-131, Written Representation on Flood Risk, groundwater protection and land contamination by Dr G.M.Reeves, CGeol CEnv PhD MSc BSc FGS FIMMM; REP8-052, Summary of oral submissions at ISH8: Cultural Heritage, landscape and visual effects and design, Section 4.3.iv: Ground Movement Monitoring Strategy, a) Through the OEMP?] We have made similar post-Examination representations, emphasizing that there are no known strategies for appropriately monitoring tunnel boring vibration and preventing archaeological damage arising from it. [12: Stonehenge Alliance letters to Transport Secretary, 16 May 2020]</p> <p>1.4.2 It is not surprising to us that some of the Durrington pits were mistaken for sinkholes or appear to be reused sinkholes: it underlines the fact that sinkholes and solution hollows occur widely over the WHS, some of them re-used in an archaeological context; some of them possibly unidentified as such within the trace of the proposed Development. We agree with Dr Garwood's observations in his recent paper on the Durrington pits.[13: TR10024-001960]</p>	<p>submissions in relation to agenda item 6 from ISH2 regarding ES Chapter 6 [REP4-030, page 2–28] and agenda item 6 (iii) in the Written Summary of Oral Submission from ISH5 regarding Noise, Vibration, Health and Wellbeing [REP4-033]. A detailed assessment of ground movement has been undertaken and the results are set out in Land Instability Risk Assessment Report [APP-278], ES Appendix 10.6. The Applicant has also provided further information regarding the tunnel movement monitoring stations, set out in the summary of oral submissions made at ISH2 regarding cultural heritage agenda item 7 (iii), DAMS paragraph 5.2.6-5.2.8 [REP4-030].</p> <p>The Applicant has previously responded to Stonehenge Alliance regarding tunnelling vibration impacts in Comments on any further information requested by the Examining Authority and received at Deadline 4 [REP5-003, para. 11.2.57]. The Applicant's Comments on any further information requested by the Examining Authority and received at Deadline 4 sets out further information on the ground movement monitoring and complimentary vibration modelling that would be implemented during works, secured under the DCO through provisions included in the OEMP [TR010025-001949] including MW-CH1, MW-CH7, MW-CH8, MW-NO13, MW-NO15 and MW-NO16 with the development of the Heritage Management Plans and monitoring strategy to protect the historic environment, further detailed in the DAMS [TR010025-001951, paras. 5.1.20–24, 6.1.3–10 &amp; 7.3.3 and Appendix C.2]. The Applicant explained that the Ground Movement Monitoring Strategy and Noise and Vibration Management Plan will address the requirement that best practicable means are used to minimise noise and vibration across the Scheme (OEMP PW-NOI1, MW-NOI1 [TR010025-001949]) in item 4.3 (i) of the Written Summary of Oral Submissions put at Cultural Heritage, Landscape and Visual Effects and Design Hearing on 21 August 2019 [REP8-</p>
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016]. We agree that there is no standard threshold for construction vibration levels or tunnelling induced ground movements significantly affecting archaeological earthworks, such as burial mounds, and buried assets, due to the unique and varying sensitivity of such assets. There are good reasons to not establish precise levels of vibration for the Scheme at this stage, not least given the assessment undertaken to date has adopted a conservative approach and is therefore extremely robust, and it has not identified likely significant vibration effects on heritage assets. Highways England will continue to discuss with key stakeholders the issue of the methodology for measuring vibration during detailed design. Key stakeholders including Wiltshire Council, the Environment Agency, Historic England and Natural England will feed into the process of determining the final vibration monitoring regime, including in relation to archaeology. The Noise and Vibration Management Plan and the Ground Movement Monitoring Strategy would both be approved by the Secretary of State, and the Heritage Management Plan would be approved by Wiltshire Council.

The Applicant has already considered sinkholes and solution hollows, unused and reused, in its assessments. All of the sinkholes / solution hollows identified by Paul Garwood in the recent publication within the DCO boundary were already identified by the Applicant with reference to its own geophysical surveys and its archaeological trial trenching. The Stonehenge Hidden Landscapes Project provided Highways England with data and an interpretative report relating to a restricted study corridor, comprising the Scheme boundary and a limited 50m buffer and including geophysical survey data above the line of the tunnel. This data and an interpretative report were provided by SHLP on a commercial basis and subject to a requirement not to distribute



		<p>further: this report was fully considered by the Applicant in their preparation of the Environmental Statement and Archaeological Baseline Report [APP-211] and Gazetteer of Archaeological Assets [APP-212].</p> <p>The archaeological evaluation undertaken for the Scheme did identify and investigate the large pit-like features within the Scheme boundary that are cited by Mr Garwood, as well as similar features within the Scheme boundary [see REP1-045 &amp; 046; REP1-042 &amp; 043; REP1-049 &amp; 050; REP1-051]. As noted in its overarching response addressing the ‘new discovery’ submitted to the Secretary of State on 13th August, the Applicant considers that “the interpretation” of the features cited by Mr Garwood as “of natural origin (but containing cultural material) is sound, based on the evidence from the evaluations. As far as any additional or wider interpretation that might be entertained in light of the recently published discovery, the interpretation as natural features does not preclude anthropogenic modification and the mitigation strategy for the Scheme allows flexibility to investigate and interpret such features further” [TR010025-001981, para. 6.2.2].</p>
7.7	<p>2.1.1 That a major new site in the WHS should have been identified only now is a strong indication that other sites, both major and minor, are yet to be discovered elsewhere within the WHS and its setting, potentially within, across or partly across the trace of the proposed Development. The data obtained by the Stonehenge Hidden Landscapes Project – a more sophisticated and thorough exercise than that undertaken for Highways England’s evaluation of the land required for the proposed Development [14] – awaits full analysis and will inevitably prove to be the source of further new finds, re-assessments and hypotheses. Evaluation of</p>	<p>The Applicant would also point the Secretary of State to submissions made by Historic England [TR010025-001972], Wiltshire Council [TR010025-001968], the National Trust [TR010025-001949] and English Heritage Trust [TR010025-001970] as to the evidence base for the ‘new discovery’ and its significance. The Applicant disagrees that the ‘new discovery’ gives any indication that other sites are yet to be discovered or that evidence has been missed or lost in the Applicant’s evaluation work to date. The evaluation carried out by the Applicant and therefore the assessment of the effects of the Scheme on archaeology are robust. As set out in the Applicant’s Overarching Response addressing the ‘new discovery’ [TR010025-001981,</p>



<p>any proposed development impacting on the WHS and/or its setting ought to be conducted on research lines to obtain maximum information – and bearing in mind the potential importance of that information if it can be re-examined under future investigative techniques. There can be little doubt that an unknown amount of archaeological evidence has already been missed and indeed lost in Highways England’s evaluation work to date; far more would be lost should the Scheme go ahead.</p>	<p>section 2.3] and in evidence given orally at hearings on 5 and 6 June 2019 [REP4-030, items 5 (i) and (ii)], the archaeological evaluation strategy was developed in consultation with A303 Heritage Monitoring and Advisory Group (HMAG, comprising representatives of Wiltshire Council and Historic England as statutory bodies, and the National Trust and English Heritage Trust) and the Scientific Committee. The HMAG is supplemented by a Scientific Committee of independent experts, membership of which includes Professor Gaffney, the principal author of the 2020 SHLP paper on the ‘new discovery’.</p> <p>The draft Archaeological Evaluation Strategy Report (AESR) and its accompanying and Overarching Written Scheme of Investigation (OWSI) (including proposals for extensive geophysical surveys) were developed in consultation with the HMAG with advice from the Scientific Committee (which included a geophysical survey expert and member of the Hidden Landscapes Project - Professor Gaffney) [REP3-013, para. 56.1.65]. The AESR and OWSI were approved by Wiltshire Council and HMAG and guided the development by Highways England of Site Specific Written Schemes of Investigation (SSWSIs): these SSWSIs were approved, and their implementation on site monitored, by Wiltshire Council and, for sites within the WHS, HMAG. HMAG approved the scope, coverage, area and techniques to be employed in the Applicant’s Archaeological Evaluation in the WHS – including the resolution and techniques required for the Applicant’s geophysical surveys.</p> <p>With regard to the Stonehenge Alliance’s assertion that “the data obtained by the Stonehenge Hidden Landscapes Project (SHLP) is a more sophisticated and thorough exercise than that undertaken for Highways England’s evaluation of the land required for the proposed Development”, the Applicant details the quality</p>
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and adequacy of its evaluation techniques in its Overarching Response addressing the ‘new discovery’, noting “The evaluation strategy was developed in consultation with stakeholders and applied a combination of non-intrusive surveys and trial trenching in accordance with standard practice and guidance. The extensive use of trial trenching to validate Highways England’s geophysical surveys results contrasts with the very limited coring and lack of excavation in respect of the Durrington Walls discovery as described in the 2020 SHLP paper. The archaeological evaluation results, combining geophysical surveys with testing by trial excavation, form a robust baseline on which to make assessments of the impacts of the Scheme upon archaeological remains” [TR010025-001981, section 2]. The SHLP provided data and interpretative reporting in 2018 for the corridor required for the proposed development to Highways England on a commercial basis and subject to a requirement not to distribute further: this report was fully considered by the Applicant in their preparation of the Environmental Statement. The complete dataset from the SHLP surveys in 2010–2014, or more recently, has not been released into the public domain, for example through deposition of the data or interpretive reports with the Wiltshire and Swindon Historic Environment Record. As such, it has not been possible for the Applicant to review or use the underlying data that has supported the ‘new discovery’.

Further, four established geophysical survey techniques were employed – detailed magnetometer (gradiometer) survey across the full extent of the Scheme boundary, while targeted use of electrical resistance survey, ground penetrating radar (GPR) and electrical resistance tomography (ERT) served to further elucidate the results. These are further detailed in the Applicant’s overarching response addressing ‘new discovery’ responding to Secretary of State letter dated 16 July 2020 [TR010025-001981,

section 2.3]. As noted in the Applicant's overarching response, geophysical survey is but one part of the evaluation strategy. The strategy provided for testing of the geophysical survey results through field evaluation – trial trenching, including environmental and geoarchaeological sampling, and coring of deeper features – to confirm the interpretation of the geophysical anomalies. The full picture of the evaluation results – not the geophysical surveys alone – has been taken into account in developing the DAMS [TR010025-001951].

This combination of non-intrusive and intrusive techniques accords with the Chartered Institute for Archaeologists (CIfA) Standard and Guidance for archaeological field evaluation. Geoarchaeological and environmental sampling and scientific dating were undertaken as part of the evaluation process in consultation with qualified specialists, in accordance with the Archaeological Evaluation Strategy Report (AESR, [Highways England, 2018a](#)) and Overarching Written Scheme of Investigation for Archaeological Evaluation (OWSI; [Highways England, 2018b](#)). These were developed in consultation with, and approved by, Wiltshire Council and HMAG (in the latter case, for sites within the WHS), with advice from the Scientific Committee.

The archaeological evaluation results, combining non-intrusive geophysical surveys, ploughzone artefact sampling and testing by trial trenching, therefore form a robust baseline on which to make assessments of the impacts of the Scheme upon archaeological remains [see the written summaries of the Applicant's oral submissions made at hearings on 5 and 6 June 2019, REP4-030, items 5 (i) and (ii)]. The robustness of the evaluation strategy is demonstrated by the approval by Wiltshire Council and (for sites within the WHS) HMAG of the AESR, OWSI and individual SSWSIs; and by the monitoring of the implementation of the



strategy on site and approval of the resulting evaluation reports [REP1-039 to REP1-056; REP3-023 & REP3-024]. The suitability and comprehensiveness of the evaluation programme were confirmed in evidence by the County Archaeologist, Ms Pomeroy Kellinger on behalf of Wiltshire Council [REP4-030, items 5 (i) and (ii)]. It is clear therefore that there is no deficiency in the scope or execution of the evaluation strategy. The Applicant stands by its comprehensive and robust evaluations as indicated by Historic England's recent assessment of the Applicant's geophysical surveys in its submission dated 13th August [TR010025-001972].

With regard to Stonehenge Alliance's assertion that "far more [archaeological evidence] would be lost should the Scheme go ahead", it is misleading to suggest that the Applicant's approach to evaluation and mitigation will lead to the loss of a majority of the archaeological remains without record: the DAMS contains detailed requirements for the preservation, investigation, recording and public dissemination of information gathered on archaeological remains, all via approaches developed in consultation with Wiltshire Council, Historic England and HMAG, which meet or exceed industry standards.

With regard to any archaeological evidence not already identified, the DAMS [TR010025-001951] and its Archaeological Research Agenda (ARA) provide mechanisms to ensure a flexible response to the archaeological resource that address relevant research questions. The approach of the DAMS is based on developing site-specific research questions and focusing site decision-making on addressing these. The DAMS provides ample scope to address discoveries during the mitigation programme, and to take account of emerging discoveries and theories within and in the vicinity of the WHS.

Wiltshire Council and Historic England consider that the DAMS and its ARA provide an appropriate basis for development of site-specific research questions and SSWSIs.

- Wiltshire Council's response to the Secretary of State's Consultation of 16 July 2020 states: "The Council sees no need for a wholesale review of the key scheme documents which are comprehensive and compliant" and "The DAMS and forthcoming SSWSIs provide a mechanism for fully assessing any further such features which may be discovered during the mitigation phase on the road line and portals, in the unlikely event that they have not been picked up during the evaluation." [TR010025-001968, sections 2.4 & 2.5].
- Historic England's closing submission [AS-111] confirms, "We believe that the dDCO, OEMP and DAMS set out a process to ensure that heritage advice and considerations can play an appropriate and important role in the construction, operation and maintenance of the Scheme [...] we consider sufficient safeguards have been built in for the detailed design stage."
- As confirmed in Historic England's response to the Secretary of State on 13th August 2020, with regards to the DAMS [TR010025-001951], "In our opinion the provisions in the Detailed Archaeological Method Statement (DAMS) are sufficient to enable the Site Specific Written Schemes of Investigations (SSWSIs) to draw on the implications of the SHLP research in finalising the detailing of the



		<p>programme of archaeological mitigation should the Scheme be granted consent. Safeguards have been included within the DAMS and Outline Environmental Management Plan (OEMP) to facilitate the integration of the matters raised by the research into the approach taken to the Scheme.”</p> <p>In addition, the National Trust, in their response [TR010025-001975] state: “This reflexive approach, coupled with the promotion of high quality research has the ability to ensure the archaeological mitigation undertaken as part of the Development responds appropriately to any new information, and discoveries in order to appropriately hone both the creation of SSWSIs, and to allow for further modification in light of additional information that comes to light during the course of fieldwork.” [TR010025-001975, para. 6.1.7].</p> <p>The Applicant further details the fitness for purpose of the DAMS in their Overarching Response addressing the ‘new discovery’ [TR010025-001981, section 5].</p>
7.8	<p><b>2.1.2 The Heritage Impact Assessment</b> needs revision to include the new find, its location and significance and potential for greater understanding of the WHS.</p> <p>At the same time, the impacts of the proposed Development on both the WHS and its setting should be evaluated properly: a requirement hitherto not undertaken, as was pointed out by us [15] and, notably, ICOMOS-UK during the Examination. [16]</p>	<p>The Applicant has provided Addenda to the ES [TR010025-001979] and the HIA [TR010025-001980] to the Secretary of State on 13th August which include an assessment of the ‘new discoveries’, taking the conclusions of the publication at face value, and the impact of the Scheme upon them. The Addenda conclude that there will be no new Likely Significant Effects following the discoveries and the impact of the Scheme on the OUV of the WHS as a whole remains unchanged. The Applicant has previously addressed the Stonehenge Alliance’s assertions regarding the ‘proper evaluation’ of the impacts of the Scheme on both the WHS and its setting [REP3-013, paras. 12.3.74; 12.3.93–</p>

101; 12.3.106–114; 12.3.136–138; 12.3.148–155] as well as Written Representations from others [REP3-013, paras. 24.2.63–68; 26.2.13–21; 47.1.7–9; 47.1.14–18; 47.3.3–4].

The Heritage Impact Assessment (HIA) [APP-195, section 11] assesses the overall impact and significance of effect of the Scheme on the OUV of the WHS, including physical, visual, noise, setting and other impacts. The Applicant notes that the Attributes of OUV stress the importance of the siting of the sites and monuments in relation to the landscape, in relation to the skies and astronomy, in relationship to each other, and their siting, physical remains and setting that together form a landscape without parallel. The HIA considers and assesses the impact of the Scheme on Attributes of the OUV of the WHS, including the setting and relationships between the monuments within the visual envelope of the WHS. ES Chapter 6, Cultural Heritage [APP-044], reports impacts on all designated and non-designated heritage assets, including the Stonehenge, Avebury and Associated Sites WHS. These are informed by ES Appendix 6.9 - Cultural Heritage Setting Assessment [APP-218], and draw on data from other technical disciplines. The HIA Scoping Report and its approach was approved by HMAG (including Historic England, Wiltshire Council, the National Trust and English Heritage). Historic England also noted that the HIA was thorough and broadly concurred with the assessment in the HIA in its application of the ICOMOS 2011 guidelines [TR010025-001972] and the overall assessment conclusions. In particular, Historic England stated in that submission (para 2.4.10):

"We consider that the assessments conducted under the Scheme were sufficiently rigorous to inform determination of the Scheme and development of an appropriate and proportionate



		<p>archaeological mitigation strategy. The recently published research does not change our view of those assessments."</p> <p>Details of how the Scheme has been developed to avoid and minimise adverse impacts on cultural heritage and to protect or enhance the setting of the WHS are provided in ES Chapter 6, Cultural Heritage [APP-044], Section 6.8, Embedded Mitigation, and Table 6.9. The Scheme design has been developed having regard for the potential impact of the Scheme on the World Heritage Site and its OUV.</p>
7.9	<p><b>2.3 The Draft Archaeological Mitigation Strategy</b> is not fit for purpose. We are in complete agreement with the views of Dr Garwood on this matter. [17] We suggest that the magnitude of the damage the Development would cause to the WHS and its setting would render the "mitigation" proposed shockingly ineffective in a WHS designated for its archaeological and archaeological landscape qualities. The new find, one of many more to be revealed as research continues over time, serves to underline the importance of protecting the whole WHS and ensuring that any necessary modern intervention is undertaken on research-led principles.</p>	<p>The Applicant stands by its Detailed Archaeological Mitigation Strategy (DAMS) [TR010025-001951] which has been endorsed by heritage consultees as 'fit for purpose'. Wiltshire Council and Historic England consider that the DAMS and its ARA provide an appropriate basis for development of site-specific research questions and SSWSIs. Historic England's closing submission [AS-111] confirms, "We believe that the dDCO, OEMP and DAMS set out a process to ensure that heritage advice and considerations can play an appropriate and important role in the construction, operation and maintenance of the Scheme [...] we consider sufficient safeguards have been built in for the detailed design stage".</p> <p>The DAMS is research-led and focussed, in the context of the whole WHS and its setting. This is made clear at paragraph 1.2.1 where it states that '<i>The Scheme passes through a landscape of high archaeological significance, both inside and outside the WHS. Accordingly, the intention of the Strategy is to apply the highest practicable standards of mitigation, employing innovative approaches to address a question-based research strategy that places the significance of the archaeological resource at the centre of decision-making both at design and implementation</i></p>



		<p><i>phases.</i> A Scheme specific Archaeological Research Agenda is also set out at Section 4 of the DAMS.</p> <p>The Archaeological Research Agenda (ARA) was subject to discussion at hearings: see Report in the Written Summary of Oral Submissions put at Cultural Heritage, Landscape and Visual Effects and Design Hearing on 21 August 2019 [REP8-016, item 5]. The DAMS is founded on ‘research-led principles’, considering the archaeological evidence identified during the evaluation programme and known from other surveys in the area against the themes and research questions set out in relevant published research frameworks. As part of the DAMS, the ARA has been developed in consultation with HMAG and the Scientific Committee, who were invited to contribute research themes and questions.</p> <p>The Applicant further details the fitness for purpose of the DAMS in their Overarching Response addressing the ‘new discovery’ [TR010025-001981, section 5].</p>
7.10	<p><b>2.3 The World Heritage Convention and planning policy</b> have not been properly addressed in the Environmental Statement and appropriate revisions are needed.</p> <p>Although the new find provides clear evidence that the “archaeological landscape” extends beyond the WHS, the WHS boundary was defined to include all recognized elements of what was identified in 1986 and continues today to be a “landscape without parallel”. Apart from HMG’s commitment to protect the designated WHS property under the WH Convention, there is a raft of protective policy and guidance designed to ensure that commitment is met. We gave</p>	<p>The Applicant has responded to this point previously with regards to how it is in compliance with the requirements of the World Heritage Convention and planning policy in its response the Examining Authority’s Written Question G.1.1 [REP2-021], the Applicant’s Comments on Written Representations [REP3-013], particularly paragraphs 21.4.8–16 in response to the Council for British Archaeology and paragraphs 60.2.33–36 in response to the Blick Mead Project Team, its Written Summaries of oral submissions at Cultural Heritage Issue Specific Hearings (ISH2) [REP4-030] (specifically Agenda Items 3(i), 3(v), 3(vi) and Appendix A to that document), item 11.2.25 in response to the Stonehenge Alliance and items 34.1.47 – 34.1.62 in response to the Consortium of Archaeologists of the Applicant’s response to</p>



	<p>evidence to the Examination on this issue [18] and endorse the submissions of Victoria Hutton.[19]</p>	<p>comments submitted at deadline 4 [REP5-003], and particularly in response to agenda items 3.1(i) and 3.2(ii) of the Written Summary of Oral Submissions put at Cultural Heritage, Landscape and Visual Effects and Design Hearing on 21 August 2019 [REP8-016].</p> <p>The Applicant considers the implications of the archaeological find for the Development and any harm it may cause to the World Heritage in its Overarching Response addressing the ‘new discovery’ responding to Secretary of State letter dated 16 July 2020 [TR010025-001981], and the accompanying HIA Addendum [TR010025-001980] and ES Addendum [TR010025-001979]. The Overarching Response document states that “The HIA Addendum demonstrates that the effect of the Scheme on the WHS as a whole, the Attributes of OUV, its Integrity and Authenticity, as assessed in the Main HIA submitted with the Application, would be unchanged. The ES Addendum has not identified any new likely significant effects beyond those already identified in the Main ES submitted with the Application.” [TR010025-001981, section 6].</p> <p>The ‘new discovery’ does not raise any issues with regard to compliance with the World Heritage Convention (WHC) or associated planning policy. The Scheme does not breach the WHC and is in full compliance with the UK’s international legal obligations. In light of the conclusions presented in the HIA Addendum and ES Addendum, it is clear that the Scheme conforms with the NPSNN [TR010025-001981, paras. 1.2.6 and 1.2.7; pages 45-46].</p>
7.11	<p>3.1 We support the points raised by Victoria Hutton, on behalf of the Consortium of Archaeologists and the Blick Mead Project Team concerning re-opening of the Examination of the DCO application to allow the</p>	<p>As set out in the Applicant’s Overarching Response addressing the ‘new discovery’ [TR010025-001981, Appendix A] the Applicant does not agree with these comments.</p>



<p>implications of the new find for the proposed Development to be discussed by all interested parties. [20] Re-opening the Examination might also provide an opportunity to discuss the implications of data from the critical winter tranche of groundwater pumping tests not yet undertaken.[21]</p>	<p>The Applicant notes that the Secretary of State's letter of 16 July 2020 set out a full process for allowing the recipients to respond to the SHLP paper 2020 and to the submissions of the Blick Mead Project Team and Consortium of Archaeologists or the Stonehenge Alliance on 25 and 26 June 2020, as well as to allow the Blick Mead Project Team and Consortium of Archaeologists and/or the Stonehenge Alliance (and other interested parties) to submit further submissions by 13th August 2020, which these interested parties took advantage of (including the Stonehenge Alliance).</p> <p>Further, by the Secretary of State's letter of 20 August, a subsequent process was set out by which interested parties have been given a further period within which to comment on submissions. In addition, the Applicant has undertaken notification and consultation procedures mirroring Regulation 20 of the 2017 EIA Regulations in respect of its work submitted to the Secretary of State on 13th August.</p> <p>As such, all interested parties have had a full opportunity to be consulted and submit representations/evidence as they consider appropriate on the issues at hand. The Secretary of State will then need to take these submissions into account when determining the application. There is therefore no basis for any assertions of procedural unfairness.</p> <p>In respect of the point raised around groundwater pumping tests, as set out in the Applicant's responses to SWQs Fg 2.25 and 2.38 (these then cross refer back to relevant prior submissions) [REP6-028], and Appendix A of the Applicant's written summary of oral submission at the ISH on flood risk, groundwater protection, geology and land contamination, which dealt with detailed queries on the information that informed the groundwater assessments in the ES [REP8-018], further pumping test data is not required to</p>
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		<p>understand or to inform the assessment carried out in, the Environmental Statement or anything else in the Application, which was based on the information set out in the Preliminary Ground Investigation Report (GIR) [APP-273]. Submission of further data for the Secretary of State's consideration is therefore not necessary or appropriate.</p>
7.12	<p>3.3 We are concerned that the delayed decision means that any grant of DCO in November 2020 would be taken almost 25 months after the submission of the application and 13 months after the examination concluded. It is therefore highly likely that surveys conducted by Highways England as part of the ES will be out of date.</p>	<p>Surveys will not be out of date. Decisions on infrastructure (and indeed other major) projects necessarily (by law) have to be made after an Environmental Statement has been submitted and considered (including by interested parties) over a period of time through the planning process. As such, there will inevitably be a period of time between the carrying out of surveys to inform assessments and any consenting decision. This is no different in the case of the Scheme.</p>
7.13	<p>3.4 Similarly, changes in GDP projections and population forecasts since the application was submitted are likely to have a further negative impact on the already tenuous economic case for the Scheme.</p>	<p>To demonstrate the Value for Money that the Scheme offers, the costs of the Scheme must be compared with the expected positive and negative impacts. The appraisal approach has been designed to capture these impacts as fully as possible, in a way that is suitably proportional.</p> <p>As stated in the Combined Modelling and Appraisal Report (COMMA) [APP-298], the Scheme has already considered alternative projections to GDP and population forecasts. The low growth scenario has demonstrated that the Scheme's economic case is resilient to lower GDP growth projections.</p>

## 8 Suzanne Keene

	Matter Raised	Highways England's Response
8.1	<p>The recent archaeological discovery of a number of massive prehistoric pits surrounding Durrington Walls has illustrated and reinforced one of the major reasons for my opposition to it: the enormous destruction that it would entail of potential archaeological evidence.</p>	<p>Heritage has been a key consideration during route selection and consultation, being one of the Scheme's objectives to help conserve and enhance the World Heritage Site (WHS). The preferred route was carefully chosen to minimise effects on archaeology, and a comprehensive programme of archaeological evaluation surveys has informed the Scheme design to limit direct physical impacts as far as practicable, including limiting impacts on archaeological remains that contribute to the Outstanding Universal Value (OUV) of the WHS.</p> <p>Examples of how the design has been developed to limit direct impacts on archaeology include the choice of a northern bypass of Winterbourne Stoke, the reduced footprint and land-take for Rollestone Corner, and the design and placement of the western and eastern tunnel portals and approaches in areas that have been shown to have limited archaeological remains within their footprint. Further information can be found in the Assessment of Alternatives, Environmental Statement (ES) Chapter 3 [APP-041] and in ES Chapter 6, Cultural Heritage [APP-044], section 6.8, table 6.9.</p> <p>The Applicant disagrees with Suzanne Keene's assertion that the Scheme will cause 'enormous destruction of potential archaeological evidence'. As set out in the Detailed Archaeological Mitigation Strategy (DAMS) [TR10025-001951], the archaeological</p>



		<p>remains that are uncovered within the footprint of the Scheme will be carefully recorded and excavated in advance of Scheme construction [TR010025-001951; section 6.3]. The Scheme has been designed carefully and sensitively to avoid known archaeological remains wherever possible. The DAMS is an iterative, research-led strategy in which sampling strategies and fieldwork methods are tailored to maximise the research potential of the archaeological remains identified in the course of archaeological investigations. The DAMS requires that a comprehensive publication and dissemination programme be developed [TR010025-001951; section 9] in parallel with the strategy for Public Archaeology and Community Engagement [TR010025-001951; Appendix E], to deliver a lasting legacy from the archaeological investigation and recording works undertaken for the Scheme. The DAMS is secured by paragraph 5 of schedule 2 of the draft Development Consent Order [AS-121].</p> <p>The Applicant has previously responded to Suzanne Keene regarding principles of archaeological mitigation and the comprehensive archaeological mitigation measures set out in the DAMS in its Comments on Written Representations [REP3-013, paras. 58.2.9–10; 58.2.17–18; 5.2.20–22].</p>
8.2	<p>It is simply not possible that archaeological investigation carried out in advance of the works can retrieve all the potential information. The sampling will be coarser, and new techniques of investigation are developed almost daily. Most members of the project's own <a href="#">Scientific Committee</a> hold this same view.</p>	<p>The Applicant challenges that Suzanne Keene has not clearly spelled out what 'fully rigorous research excavation' is in her submission and how the Applicant's archaeological investigations to date and those proposed in the Detailed Archaeological Mitigation Strategy (DAMS) [TR010025-001951] do not meet those standards.</p>



<p>As <a href="#">distinguished archaeologists have recently written</a>, only fully rigorous scientific research excavation would have uncovered the significance of the latest discovery.</p>	<p>The Applicant also disagrees with Suzanne Keene’s point that only ‘research excavation’ would have uncovered the ‘latest discovery’. Indeed, many of the anomalies recently reported were discovered, investigated and reported upon by a professional archaeological organisation (the organisation that undertook the archaeological evaluations for the Scheme) in advance of Ministry of Defence developments to the north and northeast of the WHS using the same investigation techniques as for the surveys preceding the Scheme (<a href="https://doi.org/10.5284/1058924">https://doi.org/10.5284/1058924</a>). These archaeological mitigation works were monitored by Wiltshire Council [see their response to the Secretary of State on the 13<sup>th</sup> August; TR010025-001968]. Wiltshire Council will also monitor all of the archaeological mitigation works outside the WHS, and, as part of the Heritage Monitoring and Advisory Group (HMAG) (which includes Historic England, Wiltshire Council, the National Trust and English Heritage), all archaeological mitigation works within the WHS as part of the Scheme.</p> <p>Members of the Scientific Committee are independent, and do not all hold the same views or respond as one body. Not all members of the Scientific Committee are against the Scheme – we note Mike Pitts FSA and Professor Tim Darvill, who are members of the Scientific Committee, have submitted supportive responses to the Secretary of State on the 13<sup>th</sup> August [TR010025-001967 and TR010025-001964].</p> <p>The DAMS [TR010025-001951], which has been developed in consultation with HMAG (including Historic England’s Science Advisor for the South West of England), requires that Site Specific Written Schemes of Investigation are to be developed by the Appointed Archaeological Contractor for the Scheme including detailed site-specific research questions. The Scientific Committee will be invited to collaborative technical workshops with the</p>
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Archaeological Contractor and members of HMAG to discuss the research questions and appropriate sampling strategies and scientific techniques to be deployed [TR10025-001951 - see for example paragraphs 6.3.16 and 6.3.51] for sites within the WHS ensuring that the most up-to-date techniques are discussed and the opportunity for their deployment as part of the Scheme discussed. The DAMS is secured by paragraph 5 of schedule 2 of the draft Development Consent Order [AS-121].

A comprehensive publication and dissemination programme [TR10025-001951; section 9] is also required to be developed by the appointed Archaeological Contractor for the Scheme. In developing this the appointed Contractor will consult with HMAG who will seek advice from the Scientific Committee.

The DAMS also require the development of a Public Archaeology and Community Engagement (PACE) Strategy [TR10025-001951; Appendix E] which will link to the work of Highways England's A303 Benefits and Legacy Forum and Benefits Steering Group. This Steering Group looks to work with partner organisations to develop the Scheme legacy and benefits as the Scheme develops, tying into the priorities set out within the 2015 WHS Management Plan.

The archaeological results and the archive of finds and reports would be available for study in the future, enabling knowledge of the ancient landscape to be re-evaluated as knowledge of our past and scientific techniques evolve.

The Scheme would not compromise the enjoyment and understanding of the WHS for future generations. The Scheme will create opportunities for greater public access, and appreciation and enjoyment of the WHS through increased connectivity of key monuments and monument groups north and south of the existing

		<p>A303 using public rights of way. The Scheme will enable beneficial opportunities for transmission of OUV and for increasing the public's awareness, understanding and perception of the OUV of the WHS in a local, regional, national and international context.</p>
8.3	<p>The discovery of the pits 'must fundamentally reconfigure all current knowledge and understanding of the prehistoric landscape' (<a href="#">Paul Garwood</a>).</p>	<p>The Applicant refers the Secretary of State to the responses by Wiltshire Council [TR010025-001968] and the National Trust [TR010025-001975] with regards to the evidence base and significance of the 'new discoveries'.</p> <p>The Applicant has assessed the significance of the 'new discoveries', taking the results of the 2020 Stonehenge Hidden Landscapes Projects (SHLP) Paper at face value, and has submitted Addenda to the ES [APP-TR010025-001979] and HIA [TR010025-001980] that consider the Scheme's impact upon them. The Applicant has assessed the impacts of the Scheme on the discoveries in the Addenda to the ES and the HIA [TR010025-001979 and TR010025-001980] and found that there will be no new Likely Significant Effects and that the overall impact on the OUV of the WHS remains unchanged. The Addenda assess impacts and effects on the 'new discovery', its stated interrelationships, its contribution to expressing Attributes of OUV and the WHS as a whole. The Addenda conclude that, overall, the Scheme would sustain the OUV of the WHS and have a slight beneficial effect on the WHS as a whole. The Applicant has considered the degree of harm to heritage assets as required for the purposes of the NPSNN, and, given its assessment of impact on the WHS and its OUV, does not consider substantial harm would be caused to the WHS.</p> <p>With regard to the wider Stonehenge landscape, the benefits of the Scheme associated with removal of the sight and sound of traffic from a large part of the WHS, the opportunity for</p>



		<p>reconnection of The Avenue, and the provision of a c.150m long green bridge, are considered in the context of the whole WHS and the many scheduled monuments within it, not just the Stonehenge monument. The Applicant has previously addressed this aspect in its response to Suzanne Keene in its Comments on Written Representations [REP3-013, para. 58.2.6].</p>
8.4	<p>There is massive public opposition to the tunnel (inquiry, <a href="#">REP3-078</a>). Now the public petition against the destructive works has risen in less than 6 months from 50,000 to 134,382 as I write (<a href="#">overseas</a>, <a href="#">UK</a>).</p>	<p>The Applicant has addressed public opinion in their Comments on Written Representations [REP3-013, paras. 58.1.4; 58.1.22], noting that “The views of all those who have an interest in the Scheme will be considered during the Examination, as well as information and evidence presented during the hearings which are open to the public and interested parties. The final decision on the Scheme will be made by the Secretary of State for Transport.”</p> <p>The findings of Highways England’s extensive and thorough assessments of the impacts of the scheme are not affected by the findings of the 2020 Gaffney et al. paper. The Response to Secretary of State Consultation 2 – Highways England Overarching Response, section 6, states: “The HIA Addendum demonstrates that the effect of the Scheme on the WHS as a whole, the Attributes of OUV, its Integrity and Authenticity, as assessed in the Main HIA submitted with the Application, would be unchanged. The ES Addendum has not identified any new likely significant effects beyond those already identified in the Main ES submitted with the Application.”</p>
8.5	<p>People know that it is the Stonehenge landscape, celebrated by artists and writers for centuries, that confers the full majesty on the monument. It is unthinkable that this landscape could be scarred by massive tunnel cuttings and</p>	<p>The Applicant does not agree with Suzanne Keene’s comments. The Scheme has been designed carefully and sensitively to avoid archaeological remains wherever possible and to hide the Scheme within the landscape, including in key views from sensitive heritage assets and receptors.</p>



interchanges, the monstrous scale of which would dwarf and diminish Stonehenge.

The Scheme will improve the visitor experience by transforming the WHS landscape, reconnecting the two halves of the WHS, which are currently severed by the surface road. Connectivity into and through the WHS will be improved through the placement of the road in bored tunnel and the provision of new and enhanced public rights of way across the landscape.

Cultural Heritage Design Commitments are set out in the Outline Environmental Management Plan (OEMP) [AS-129, table 3.2b]. These include specific design parameters related to road geometry and scale, land-take, lighting, signage, boundary fencing and gates to ensure that the Scheme is visually recessive and sympathetically integrated within the WHS. Design Principles are set out in the OEMP [TR010025-001949, chapter 4 and table 4.1]. The Design Vision Overall Aims stated in OEMP para. 4.2.6 include:

**“a) Respecting and Responding to the Historic Landscape.**

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

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



through its gradients and profiling, to reduce the visibility of the road. New structures should respond to the landform to maximise their concealment. The landscape and ecological design should maintain connectivity for existing habitats and re-establish landcover whilst giving due consideration to the aims and objectives of the WHS Management Plan.

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

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

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

enhance the driver experience and recognise the presence of the WHS.”

8.6

And this destruction would deliver appalling value for £1.5bn - £2.4bn (2016 prices which will surely at least double due to overspends – [NAO 2019](#), [PAC 2019](#)).

To demonstrate the Value for Money that the Scheme offers, the costs of the Scheme must be compared with the expected positive and negative impacts. The appraisal approach has been designed to capture these impacts as fully as possible, in a way that is suitably proportional.

As stated in the Combined Modelling and Appraisal Report (COMMA) [APP-299], the appraisal has demonstrated that the Scheme offers benefits that are at least 1.08 times the Scheme costs, as shown by the benefit cost ratio (BCR).

<https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010025/TR010025-000451-7-5-ComMA.pdf>

In addition, the appraisal has shown that there are significant positive indicative monetised and non-monetised benefits expected. These benefits are considered in the Value for Money (VfM) assessment, alongside the BCR.

The NAO and PAC reports are largely consistent with the Scheme COMMA, indicating that the most likely Scheme outturn costs are estimated at £1.92 billion, which leads to a slightly higher forecast Scheme BCR of 1.15.

<https://www.nao.org.uk/report/south-west-road-improvements-and-the-stonehenge-tunnel/>

<https://www.parliament.uk/business/committees/committees-a-z/commons-select/public-accounts-committee/inquiries/parliament-2017/inquiry29/>



In the context of the decision on the DCO, the BCR and VfM are not planning considerations. However, the information underlying the assessment of BCR of the Scheme, as noted in paragraphs 4.3 and 4.5 of the National Networks NPS, is. In this case, that would be the heritage chapter of the ES [APP-044] and the Heritage Impact Assessment [APP-195], rather than the financial results of the CVR. BCR and VfM considerations require all factors being balanced to be converted to the same unit of measurement (i.e. monetary units) in order to be compared. A planning decision as to whether to grant the DCO balances those same factors, however, those factors are measured in their own units, which are different for each factor. In other words, no conversion / monetisation is first required in order to undertake the planning balancing exercise as described in the Case for the Scheme and NPS Accordance document [APP-294]; it is a qualitative exercise.

It follows that the valuation of heritage benefits in monetary units is not primarily relevant to the decision on whether to grant development consent for 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.

For further detail, please see the Applicant's response at paragraph 3.1.5 of the Comments on Written Representations [REP3-013].



## 9 The Council for British Archaeology

	Matter Raised	Highways England's Response
9.1	<p><b>ISSUE 1: THE MATTERS RAISED IN THE HIDDEN LANDSCAPES PROJECT REPORT AND REPRESENTATIONS RELATING TO THE ARCHAEOLOGICAL FIND AT THE WORLD HERITAGE SITE...</b></p> <p><b>1a The Stonehenge Hidden Landscapes Project discoveries</b></p> <p><i>The Stonehenge Hidden Landscapes Project (SHLP)</i></p> <p>This international collaborative project is a major archaeological survey of the Stonehenge World Heritage Site by leading experts in their fields using multiple, state-of-the-art remote sensing techniques coupled with limited testing by physical sampling.</p> <p>The paper by Gaffney et al published in <i>Internet Archaeology</i> proposing the existence of 'A Massive Late Neolithic Pit Structure associated with Durrington Walls Henge' is not a report of the whole project. As the paper coupled with its referenced sources makes clear:</p> <ul style="list-style-type: none"> <li>- The 'Massive Pit Structure' as reported by Gaffney et al has been proposed by combining the results of several studies (including fieldwork prior to development) and subjecting them to re-</li> </ul>	<p>The Applicant's archaeological evaluation strategy is comprehensive and robust. As set out in the Applicant's Overarching Response addressing the 'new discovery' [TR010025-001981, section 2.3] and in evidence given orally at hearings on 5 and 6 June 2019 [REP4-030, items 5 (i) and (ii)], the archaeological evaluation strategy was developed in consultation with the A303 Heritage Monitoring and Advisory Group ('HMAG'), comprising representatives of Wiltshire Council and Historic England as statutory bodies (including the Science Advisor for the South West of England), and the National Trust and English Heritage Trust as major landowners and managers within the WHS. The HMAG is supplemented by a Scientific Committee of independent experts, membership of which includes Professor Gaffney, the principal author of the 2020 The Stonehenge Hidden Landscapes Project (SHLP) paper on the 'new discovery', and Professor Parker Pearson.</p> <p>The Applicant disagrees that the 'new discovery' gives any indication that other sites are yet to be discovered or that evidence has been missed in the Applicant's evaluation work to date. The evaluation carried out by the Applicant and therefore the assessment of the effects of the Scheme on archaeology are robust.</p> <p>The draft Archaeological Evaluation Strategy Report (AESR) and its accompanying Overarching Written Scheme of Investigation (OWSI) were provided to the Scientific Committee for comment [REP3-013, para. 56.1.65]. The AESR and OWSI were approved by Wiltshire Council and HMAG and guided the</p>



	<p>interpretation stimulated by the results of the SHLP geophysical surveys.</p> <ul style="list-style-type: none"> <li>- The paper covers only part of what SHLP has been revealing, one previous paper in particular having already reported the discovery of several other typically ritual monuments within the WHS.</li> <li>- These are the 'headline' discoveries amongst a wealth of data recorded by the project that otherwise has not been presented in detail in the archaeological survey reports available to the Examination (even for the area within the DCO redline boundary in the WHS only some features are listed, not the full geophysical survey results and their interpretation). [See Figure 3]</li> <li>- Even within the scope of the distribution of other large pits/hollows described in this particular paper that lie within or close to the DCO boundary, there are serious issues of interpretation; but these are not the totality of such features, only highlighting the clearest features over 5m across.</li> <li>- SHLP data was included in the baseline study for the ES but did not include all the features identified in the <i>Internet Archaeology</i> paper and this raises potentially significant issues of interpretive assumptions and accuracy in the baseline data (see below).</li> </ul> <p>RECOMMENDATION: The Secretary of State should note that the paper cited in representations made is by an international team of leading experts in their fields using</p>	<p>development by Highways England of Site Specific Written Schemes of Investigation ('SSWSIs'): these SSWSIs were approved, and their implementation on site monitored, by Wiltshire Council and, for sites within the WHS, HMAG. In her oral submission at hearings on 5 and 6 June 2019, the County Archaeologist, Ms Pomeroy-Kellinger confirmed Wiltshire Council's view that the evaluation programme was comprehensive and it is considered that enough information has come to light to give confidence going into the mitigation stage [REP4-030 item 5 (i), (ii)]. It is clear therefore that there is no deficiency in the scope or execution of the evaluation strategy. HMAG approved the scope, coverage, area and techniques to be employed in the Applicant's Archaeological Evaluation in the WHS – including the resolution and techniques required for the Applicant's geophysical surveys. The Applicant stands by its comprehensive and robust evaluations, as indicated by e.g. Historic England's recent assessment of the Applicant's geophysical surveys in its submission dated 13 August 2020 [TR010025-001972].</p> <p>With regard to the "wealth of data recorded by the [SHLP] project that otherwise has not been presented in detail in the archaeological survey reports available to the Examination", the</p>
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<p>multiple, state-of-the-art techniques, and is published in a well-respected, fully peer-reviewed international archaeological journal. He should also be fully aware that the Internet Archaeology paper does not report the whole scope of SHLP work and that the implications of the circumstances of discovery are much wider than the proposed 'Massive Pit Structure' round Durrington Walls, or even the other comparable features identified.</p>	<p>SHLP project did in 2018 provide to Highways England data and an interpretative report relating to a restricted study corridor, on a commercial basis and subject to an agreement not to distribute further: this report was fully considered by the Applicant in their preparation of the Environmental Statement' (ES) [APP-044] and the Heritage Impact Assessment (HIA) [APP-195]. The main ES [APP-044] and main HIA [APP-195, paras. 5.10.22-28] submitted with the application also considered the SHLP's 'discovery of several other typically ritual monuments within the WHS', including those published in Gaffney et al. 2018 Durrington Walls and the Stonehenge Hidden Landscape Project 2010-2016. Archaeological Prospection. 25(3): 255-269 [<a href="https://doi.org/10.1002/arp.1707">https://doi.org/10.1002/arp.1707</a>].</p> <p>However, as stated in the Applicant's Overarching Response [TR010025-001981, para. 2.6.2] submitted on 13 August 2020: 'The complete dataset from the SHLP surveys in 2010–2014, or more recently, has not been released into the public domain, for example through deposition of the data or interpretive reports with the Wiltshire and Swindon Historic Environment Record. As such, it has not been possible for the Applicant to review the underlying data that has supported the 'new discovery'.</p> <p>The Applicant, the Examining Authority and ultimately the Secretary of State can rely only on what academics have released into the public domain or the datasets and reports that it has acquired. No weight can be given to unspecified future work yet to come. At the time of the submission of the ES and the HIA the Applicant put forward and relied on the information that was available to it at that time and presented the impacts of the Scheme upon that baseline. The Applicant has submitted ES and HIA Addenda [TR010025-001979 and TR010025-001980] following the publication of the 'new discovery'. The Applicant's</p>
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assessment is robust and has assessed the significance of the 'new discovery' based on the published evidence, taking it at face value. These conclude that no new Likely Significant Effects have been identified or changes to the overall conclusions regarding the impact of the Scheme on the discovery, stated interrelationships, contribution to expressing Attributes of OUV and the WHS as a whole following the 'new discovery'.

The Applicant notes that all the sinkholes / solution hollows identified within the DCO boundary in the 2020 SHLP paper have been identified by the Applicant with reference to its own geophysical surveys and its archaeological trial trenching. The archaeological evaluation undertaken for the Scheme by the Applicant did investigate the large pit-like features within the Scheme boundary that are cited in the paper, by trial trenching, geoarchaeological boreholes and augering as well as environmental sampling [see REP1-045 & 046; REP1-042 & 043; REP1-049 & 050; REP1-051].

The reflexive and iterative nature of the Applicant's archaeological mitigation strategy, as secured in the DAMS, will also provide for full account to be taken of the SHLP's work, as appropriate. As confirmed in Historic England's response to the Secretary of State on 13th August, with regards to the DAMS [TR010025-001951]: *"In our opinion the provisions in the Detailed Archaeological Method Statement (DAMS) are sufficient to enable the Site Specific Written Schemes of Investigations (SSWSIs) to draw on the implications of the SHLP research in finalising the detailing of the programme of archaeological mitigation should the Scheme be granted consent. Safeguards have been included within the DAMS and*



		<p><i>Outline Environmental Management Plan (OEMP) to facilitate the integration of the matters raised by the research into the approach taken to the Scheme.</i></p>
<p>9.2</p>	<p><b><i>The “massive late Neolithic pit structure associated with Durrington Walls Henge” reported in Internet Archaeology vol 552</i></b></p> <p>The purpose of the <i>Internet Archaeology</i> paper is principally to draw attention to two arcs of 20+ very large features characterised as pits or sinkholes, some over 20m across and 5m deep, apparently forming part of a somewhat irregular, hitherto unrecognised, partial ring centred on the major henge monument at Durrington Walls.</p> <p>All but 6 of the 20 massive pit features (almost 75%), including the whole of the northern arc and four of the ten features in the southern arc, were already known from previous work but had variously been interpreted as natural sinkholes, ploughed-out round barrows and a circular bank.</p> <p>In the southern arc, three of the features previously identified from air photography were scheduled as largely ploughed-out round barrows. Following the recognition of the additional features making up the southern arc of suspected pits, three were tested by additional geophysics (ground penetrating radar and electromagnetic conductivity) and coring, which allowed a variety of sedimentary, palaeo-environmental and dating tests to be carried out showing they are large holes in the ground.</p> <p>In the northern arc all but one of the pit features were</p>	<p>With regard to the “massive late Neolithic pit structure associated with Durrington Walls Henge”, the Applicant has assessed the significance of the ‘new discovery’, including its stated relationships with other archaeological and natural features in the wider landscape, taking the conclusions of the Hidden Landscapes Report at face value. The Applicant submitted Addenda to the ES [TR010025-001979] and HIA [TR010025-001980] to the Secretary of State on 13th August which considered the Scheme’s impact upon the ‘new discovery’ and its stated interrelationships. Those Addenda indicate that the Likely Significant Effects of the Scheme, as reported in the ES [APP-044], and the conclusions of the HIA [APP-195] do not change following the publication of the ‘new discovery’.</p> <p>The Applicant would also point the Secretary of State to submissions made by Historic England [TR010025-001972], Wiltshire Council [TR010025-001968], the National Trust [TR010025-001949] and English Heritage Trust [TR010025-001970] as to the evidence base for the ‘new discovery’ and its significance, and to Wiltshire Council’s submission regarding the rigour of investigation of the Larkhill East and Durrington features [TR010025-001968].</p>



identified through fieldwork prior to development for housing – at Larkhill East for the Defence Infrastructure Organisation’s Army Rebasing programme; at Durrington on Defence Estates land released for commercial housing. These too were shown to be very large features, interpreted as sinkholes with significant cultural material in their fills.

As Gaffney et al state, “*substantial areas of the landscape to the west and east of these features have been developed and are no longer available for prospection.*”

Much of this is due to mid to late 20<sup>th</sup> century housing development not preceded by archaeological survey, and now also includes the latest housing developments covering c.75% of the known northern arc. Earlier housing (without prior investigation) on Durrington Road covers c.10% of the southern arc. Similarly, earlier Government housing without prior investigation covers c.35% of the as yet unconfirmed linking western arc, including most of the recently discovered causewayed enclosure. There remain only a few open areas in the northern and western arcs not yet surveyed.

None of these anomalies has been completely excavated and their dating is complex, not least because they appear to have been infilled over a significant period and some possibly re- excavated. Cores are useful in giving some indication of date and origin (especially those in the S arc), but as Gaffney et al acknowledge, much more needs to be done to understand more fully the nature of these features and their significance.

The question of whether these features are

archaeological or geological is not the main issue: such distinctions are a modern scientific construct that may have been of little relevance to prehistoric people. Large depressions, deep hollows and probably natural ponds would have been much commoner in the prehistoric landscape than is now apparent after millennia of landuse change. It is also clear that such features commonly contain important cultural material, as do artificial major pits and shafts, such as those cited by Gaffney et al (the Wilsford shaft located very close to the scheme being an especially impressive example)<sup>3</sup>.

Many comparable geophysical anomalies suggesting very large holes in the ground have been recorded in the Stonehenge area, variously interpreted as natural sink holes, dolines, hollows, pond barrows, shafts, ploughed out barrows etc. Gaffney et al map some of the most distinctive examples in their figure 9 to show that the 'Massive Pit Structure' they propose differs in the frequency and regularity of spacing, and the spatial distribution of these features as regular arcs centred on a major monument (Durrington Walls). This suggests that most if not all are deliberately located (even if some might have natural or hybrid origins).

The significance of the arcs of the proposed Massive Pit Structure is further enhanced by their close spatial relationship of the arcs to post alignments and other monuments [SEE FIGURE 1]

- An undated c.600m long post and/or pit alignment following the S arc (Gaffney et al fig 3)
- A c. 250m long post alignment dated to the



	<p>late Neolithic period following the inside of the N arc at its east (Durrington) end<sup>4</sup></p> <ul style="list-style-type: none"> <li>- A c. 35m long post alignment following the inside of the N Arc at its west (Larkhill East) end<sup>5</sup> , the other</li> <li>- In addition, there is a sub-rectangular enclosure with a segmented NE end identified in geophysics and verified by trenching at a similar distance inside the N arc and aligned on it, adjacent to Pit-feature ii This is strikingly similar to a middle Neolithic funerary monument at Barrow Hills, Radley (Oxfordshire) also adjacent to a causewayed enclosure [See FIG 5].<sup>6</sup></li> <li>- There is a linear area of enhanced magnetic response c.200m long similarly aligned inside the northern arc adjacent to pit-features 11D, 12D and 13D, but it is outside the area tested by excavation and is of uncertain character and date (Gaffney et al fig 5).</li> </ul> <p>The arcs of the proposed Massive Pit Structure appear to surround a notably large area (c. 2.3km N-S across Durrington Walls henge, which they seem to be centred on). Taken with the henge, they extend over undulating topography on the west side of the Avon valley. Northwest of Durrington Walls, the west end of the northern arc of pits/hollows appears to respect a causewayed enclosure (a ritualistic monument of earlier Neolithic date) discovered in the recent Larkhill East development but how much of the rest survives is uncertain [See FIGS 1 and 5]. So far, no comparable pit-like features are known to the or east where the River Avon swings east before returning with a</p>	
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large meander, the apex of which is very close to Durrington Walls. Rather than being a full ring, if the two arcs were completed by further features to the solitary one so far tentatively identified on the unsurveyed West side, they may have formed very large C-shaped formation ending at two points close to the River Avon.

In terms of the individual features there remain major uncertainties about their full nature, especially as only seven have been tested by excavation or coring. Moreover, the excavation of the Larkhill East and Durrington features was limited in each case to their upper (culturally rich) fills, and the interpretative assumption that they were sinkholes was not fully tested. The coring of three in the S arc characterised their fills but did not fully resolve their origins.<sup>7</sup>

Gaffney's calculations<sup>8</sup> suggest that the volume of the 20 known features may be c.5360 cubic metres; and that if the 'circuit' was no more than the C-shaped arc enclosing an area centred on Durrington Walls west of the river Avon, another 13 features could be extrapolated *pro rata* in areas as yet un-surveyed or previously built over. This then gives an estimated 9339 cubic metres for the completed C-shaped formation. It might never have been completed, but putting this into context of major Neolithic earthworks, Gaffney notes that the upper estimate is about 18% of the calculated volume of the bank excavated from the ditch of the Durrington Walls henge. It is less than 10% of the volume of material excavated from the 6m-deep ditch of Avebury<sup>9</sup>. If all the features are wholly anthropogenic and not, in some cases, utilising pre-existing natural features



such as sinkholes, the volume of the extrapolated 33 pit-features relative to linear monuments, is probably similar to the quantity of material excavated from the ditches of the nearby Stonehenge Cursus (and perhaps more than the Avenue).

Although massive in extent, the scale of excavation represented by the proposed pit features is well within the capabilities of Neolithic monument builders. Other major linear monuments such as cursuses and the Stonehenge Avenue are longer than the 2.3km N-S diameter of the pit structure across Durrington Walls. Even if never completed it significantly adds to the cumulative monument-building endeavours in the area around Durrington Walls and Stonehenge. The relationship of these arcs of pits to the undulating topography and the river is comparable to other landscape-scale monuments, such as cursuses and the Stonehenge Avenue.

Apart from Durrington Walls and its timber rings, the area defined by the arcs includes other significant monuments such as Woodhenge and other monuments recently discovered by SHLP, in the development of the Defence Infrastructure Organisation's service family housing at Larkhill East and in commercial housing on former MoD land at Durrington. Leaving aside the large pits mistaken for barrows, there are also numerous other barrows (or suspected barrows within the circuit and especially to the south, where some clusters of barrows include a linear group on the low ridge extending N from the spur in a loop of the River Avon occupied by Vespasian's

<p>Camp [APP-205 p/5 HIA Figure 3B; APP-074 pp.2-3, Fig 6.8].</p> <p>Although further investigation and verification is needed, even if just the C-shaped circuit was never completed, or if some of the features originated as natural sinkholes to which deliberately dug pits were added, the implications of the structure and its apparent association with Durrington Walls are substantial for understanding the World Heritage Site. This applies both in respect of this discovery itself and in respect of many other broadly comparable features previously assumed to be of geological or archaeological origin or both. The implications include:</p> <ul style="list-style-type: none"> <li>- The increasing range and distribution of important sacred/ritualistic landscape-scale monuments in the area around Durrington Walls and Stonehenge, both within the World Heritage Site and beyond its boundaries</li> </ul>	<p>These potential implications have all been considered by the Applicant in the ES and HIA and therefore have been considered in relation to the 'new discovery', taking the conclusions of the 2020 SHLP Paper at face value in the ES and HIA Addenda. Further detail follows.</p> <p>With regard to the “increasing range and distribution of important sacred/ritualistic landscape-scale monuments in the area around Durrington Walls and Stonehenge, both within the World Heritage Site and beyond its boundaries”, in preparing its HIA [APP-195], the Applicant has carefully considered the historical development and planning context of the WHS and its boundary, and has taken very seriously its duty to identify those Asset Groups that may contribute to the OUV of the WHS that sit either partially outside or wholly outside the existing boundary of the WHS, reflected in the assessment area used in the HIA [see APP-195, section 5.10]. These were identified at an early stage and confirmed, in consultation with the Heritage Monitoring and Advisory Group (HMAG) and the Stonehenge and Avebury WHS Coordination Unit, in order to consider the impacts of the Scheme on them. The assessment area for the Applicant’s HIA takes this context into consideration, noting that it “comprises the whole of the Stonehenge part of the Stonehenge, Avebury and Associated Sites WHS <b>and its setting</b>” [APP-195, section</p>
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	<ul style="list-style-type: none"> <li>- The added significance of Durrington Walls and its associated monuments and relationship to other key monuments within the WHS at different periods (not just</li> </ul>	<p>5.10]. The HIA acknowledges that “the effects of the Scheme may extend beyond the boundaries of the Stonehenge part of the WHS.” [APP-195, para. 5.10.2]. The HIA takes into account the draft minor boundary review [APP-195, para. 5.10.4] and considers impacts upon both sites located within the current WHS boundary, and physically related archaeological features that contribute to OUV located outside the current boundary. The HIA fully considers and takes into account sites of Neolithic and early to mid-Bronze Age date which fall within the setting of the WHS, and whose significance is reinforced by relationships with assets conveying Attributes of OUV located within the WHS, but which are located outside the current WHS boundary to the west and north. The HIA notes, “these monuments were once situated within a more expansive and unified cultural landscape, only the core of which is encompassed by the formal boundary of the Stonehenge WHS” [APP-195, para. 5.10.25].</p> <p>WHS boundary issues are further addressed in the Applicant’s Comments on Written Representations [REP3-013, paras. 21.4.87–92; 65.1.2; 65.1.5; 68.3.8–9], during oral submissions put at Cultural Heritage hearings on 5th and 6th June 2019 [REP4-030, page 2-4] and in the Relevant Representations Report [AS-026, pages 11-26 to 11-27]. The HIA Addendum [TR010025-001980] also considers the elements of the ‘new discovery’, and potential interrelationships with other heritage assets stated in the 2020 SHLP paper, located both within and outside the WHS boundary and concludes that the findings from the original HIA [APP-195] would be unchanged.</p> <p>Regarding the “added significance of Durrington Walls and its associated monuments and relationship to other key monuments within the WHS at different periods (not just Stonehenge)”, the</p>
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	<p>Stonehenge)</p> <ul style="list-style-type: none"> <li>- Increasing evidence of how the importance of Stonehenge may have ebbed and flowed in relation to the range and importance relative to other monuments that pre-date, are contemporary with, or post-date it</li>   <li>- Increasing evidence of the complexity of interrelationships between monuments of different periods and different scales</li> </ul>	<p>Applicant acknowledges that the interpretation of the WHS landscape and its wider context is the subject of constantly evolving debate. In relation to the suggested zonation of the landscape, shifting and complementary foci, and “how the importance of Stonehenge may have ebbed and flowed in relation to the range and importance relative to other monuments that pre-date, are contemporary with, or post-date it”, the Applicant’s HIA [APP-195] notes that “Parker Pearson and Ramilisonina (1998) [Parker Pearson, M. and Ramilisonina, 1998. Stonehenge for the ancestors: the stones pass on the message. Antiquity Volume 72, pages 308–326] have speculated that there was a dualistic relationship in which Stonehenge was associated with the dead, whilst Durrington Walls was seen as the land of the living, with the Avon forming part of a processional route between the two.” [APP195, pages 296; 299; 351; 403]. While it is possible to read the evidence this way, it is not necessarily the case, nor is it the consensus [REP5-003, para. 34.1.30]. This HIA also considers the fact that questions of chronological sequence and contemporaneity are complex, and strives to consider normative, mainstream and recent academic interpretations as well as divergent views.</p> <p>The “increasing evidence of the complexity of interrelationships between monuments of different periods and different scales” is reflected in the Setting Assessment, which notes that “In keeping with the guidance provided by GPA3 [Historic England 2017, <u>The Setting of Heritage Assets</u>, Historic Environment Good Practice Advice in Planning: 3 (2nd Edition)], this assessment considers setting in a broad sense, comprising each asset’s physical surroundings and the multiple ways in which it</p>
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may be experienced. As such, it considers the monuments in their immediate environment, as well as how they relate (both physically and visually) to each other and to the wider landscape (e.g. Stonehenge and the 'bowl', or Durrington Walls or the Avenue to the River Avon)" [APP-218, para. 3.6.1]. The Setting Assessment goes to note that "for sites whose purpose was more obscure, or simply less obvious in the present day, deciding what matters in terms of setting becomes complex. The placing of archaeological evidence into theoretical frameworks is a necessary means of interpreting prehistory, but presents potential difficulties for an assessment of setting. Stonehenge and its surrounding landscape have attracted academic, artistic and popular attention for many centuries. It has been the subject of some of the earliest British antiquarian studies, including physical investigations, and is undoubtedly one of the most written-about archaeological landscapes, and for which there are many theories, but where supporting evidence is often ambiguous." [APP-218, paras. 3.6.2 – 3]. "[...] The assessment takes a deliberately cautious approach, recognising the fact that we know remarkably little about the way that this landscape was used and experienced during prehistory, and that our interpretation of setting essentially reflects what matters to us in the present day." [APP-218, para. 3.6.4]. "These have been identified from on-site observations [...]" [APP-218, para. 2.4.2]. With regard to "monuments of [...] different scales", the Applicant's comprehensive archaeological evaluation surveys and both large-and small-scale of features, "trial trenching provided the opportunity to assess the presence of [...] smaller features as well as to verify the interpretations of the geophysical anomalies more generally and allow an assessment of the numbers and nature of archaeological features likely to be





	<ul style="list-style-type: none"> <li>- Increasing evidence of the importance of natural or semi-natural hollows and deposits of varied origins potentially in their own right and as repositories of cultural material exhibiting a wide variety of associated stratification and/or association</li> </ul>	<p>features”, the Scheme assessments consider the context of the wider cultural and natural landscape of the WHS, the potential for multiple phases of activity and reuse, and the episodic modification of both natural features and monuments. The HIA notes, for example, “In some instances, the barrows may have been constructed directly above earlier hengiform, or related types of monument (e.g. Gaffney et al. 2012; Bowden et al. 2015, 35–6). Amadio and Bishop (2010, 27) state that ‘Each burial or new round barrow was placed deliberately with consideration for existing burials, other monuments <b>and natural features</b>, in locations that were in harmony with the values and significances perceived at that particular time.’” [APP-195, para. 6.9.16]. “The siting of monuments may have played a role in expressions of territoriality or the construction and maintenance of identities, or may have been intended to create or reinforce <b>associations with aspects of the natural landscape</b> that were imbued with meaning by prehistoric communities.” [APP-195, pages172-3]. Natural features are further considered at Points 9.3, 9.4, 9.6 and 9.8.</p> <p>Regarding “the importance of natural or semi-natural hollows and deposits of varied origins potentially in their own right and as repositories of cultural material exhibiting a wide variety of associated stratification and/or association”, the Applicant has recognised the potential of natural features to contain cultural material and has tested these in its archaeological trial trenches, investigating tree hollows and large natural solution hollows [REP1-039 to REP1-056; REP3-024]. As stated in para. 6.2.2 of the Overarching Response [TR010025-001981]: “As far as any additional or wider interpretation that might be entertained in light of the recently published discovery, the interpretation as</p>
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	<ul style="list-style-type: none"> <li>- Ongoing evidence of how the development and application of new and/or increasingly remote sensing and other survey techniques not only reveals new physical remains but also raise new questions – including challenging old assumptions</li>   <li>- Whether more ill-defined features detected by air photography or geophysics and interpreted as barrows, dew ponds, solution holes etc might be massive pits or shafts</li> </ul>	<p>natural features does not preclude anthropogenic modification and the mitigation strategy for the Scheme allows flexibility to investigate and interpret such features further, taking account of the Durrington Walls discovery.” This aspect is addressed further at Points 9.3 and 9.4 below.</p> <p>With regard to “how the development and application of new and/or increasingly remote sensing and other survey techniques not only reveals new physical remains but also raise new questions – including challenging old assumptions”, the Applicant has responded to this previously in its Overarching Response [TR010025-001981], which reviews the adequacy of the archaeological evaluation strategy and survey techniques, including the geophysical survey. With regard to “challenging old assumptions”, the Applicant acknowledges that the interpretation of the WHS landscape and its wider context is the subject of constantly evolving debate. The reflexive and iterative nature of the DAMS [TR010025-001951] provides ample scope to address discoveries during the mitigation programme, test hypotheses, and take account of emerging discoveries, theories and understanding of the landscape. This is further addressed at Point 9.3.</p> <p>The HIA [APP-195] clearly highlights the limitations of interpreting ploughed-down barrows from aerial photographs [APP-195, para. 5.6.17b], noting that for the Countess Farm scheduled monuments, the nature of many of these possible barrow features is uncertain [APP-195, 382-390]. Many</p>
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	<ul style="list-style-type: none"> <li>- The inadequacy of the area designated as the Stonehenge landscape WHS in relation to the number, distribution, extent and significance of earlier, contemporary and later monuments and other remains contributing to the Outstanding Universal Value of the WHS but not included within it – or in this case both within and outside it</li> </ul> <p>RECOMMENDATION: The Secretary of State should be aware of the major implications of the proposed major landscape-scale monument identified by the Internet Archaeology paper as part of the OUV of the WHS and in particular the inter-relationships between monuments and the natural topography of the area. He should also be aware of the full circumstances of the identification, that c.75% of the features making up the ‘new discovery’ have</p>	<p>cropmark features with possible barrow or ring-ditch forms within the WHS have been scheduled as a precautionary measure; these are considered in the Applicant’s HIA as designated discrete assets which convey Attributes of OUV of the WHS; others are assessed in accordance with the scale set out in the HIA’s evaluation of the heritage resource [APP-195, section 5.7]. The large pits illustrated in figure 9 of the SHLP 2020 paper have been reviewed, and each one addressed in the ES and HIA Addenda submitted in response to the Secretary of State’s request for further information [TR010025-001979; TR010025-001980]. This is further explained at Point 9.8 below.</p> <p>With regard to the “inadequacy of the area designated as the Stonehenge landscape WHS”, boundary issues are addressed above, within this response.</p> <p>The types of implications of the proposed ‘new discovery’, including interrelationships between monuments and topography, have all been considered already in the ES and HIA and to the extent they apply to the ‘new discovery’ have been considered in full, taking the conclusions of the paper at face value in the ES and HIA Addenda, all as set out above. The DAMS is designed to be flexible so that it can respond to new interpretations in the mitigation strategy employed and the ES</p>
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<p>already been identified but interpreted in different ways; that they straddle the boundary of the WHS; and that most of the northern arc was recently built over after the discovery of the features. Unfortunately, these features were incompletely investigated, and with hindsight not recognised for their potential as part of a major landscape-scale monument. As a result, much of the circuit is now unavailable for further investigation.</p>	<p>and HIA and their Addenda already consider assets outside the boundary of the WHS. With regard to the ‘incomplete’ investigation of the ‘northern arc’ and its unavailability for further investigation, the CBA is mistaken. The Applicant has previously noted that “It is through the planning system that changes to buildings and land in England is managed. The planning system guides decisions on proposed changes to historic buildings and places, including those which are protected. Decisions regarding commercial / residential developments and the army rebasing programme, to the north and east of the WHS, and whether these should be granted planning permission or not are a matter for Wiltshire Council, and in relation to designated heritage assets of the highest significance (such as the WHS), Historic England will provide their advice to the Local Planning Authority. These developments are granted planning permission with archaeological planning conditions that require archaeological mitigation in advance of construction. The sites are therefore not ‘sterilised’ by building over them but are archaeologically recorded to high standards in advance of construction. That material, once published, is then available for reanalysis, re-interrogation and re-interpretation once the archive has been assembled and deposited with a Museum.” [REP5-003, para. 34.1.22].</p> <p>With regard to the CBA’s implication that development-led archaeological mitigation may result in “features [being] incompletely investigated”, this is simply not applicable to the Scheme. The Scheme’s comprehensive Detailed Archaeological Mitigation Strategy (DAMS) [TR010025-001951] provides a robust, flexible and iterative strategy for the mitigation of impacts on both known and presently unknown archaeological remains. Developed in consultation with HMAG, and with input from the Scientific Committee, the DAMS seeks to capture</p>
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		<p>current research questions and is reflexive and iterative in order to respond to developing theories, interpretations and technologies as the design of the archaeological mitigation works is progressed, and to address new discoveries during the mitigation programme. The DAMS provides ample scope to address discoveries during the mitigation programme, and to take account of emerging discoveries, theories and understanding of the uses and development of the WHS landscape. This is further detailed at Point 9.3 below. The mitigation measures will make a significant contribution to the investigation of the spatial and chronological development of the WHS and the DAMS obliges the Applicant to take measures for the careful conservation, analysis and long-term archiving of the finds and data archive recovered and to provide public dissemination of the research undertaken as part of the Scheme. Heritage consultees – Historic England, Wiltshire Council and the National Trust – have also confirmed in their submissions that the DAMS is fit-for-purpose and that the dDCO, OEMP and DAMS ensure that heritage advice can play an appropriate and important role in relation to the Scheme detailed design [TR010025-001968, sections 2.4 &amp; 2.5; AS-111; TR010025-001972; TR010025-001975].</p>
9.3	<p><b><i>Other large solution hollows, pits etc noted in Internet Archaeology vol 55</i></b></p> <p>As Gaffney et al note,</p> <p><i>There are a number of substantial pit-like anomalies within these datasets, including individual features that may be comparable in size to the Durrington pits and which have also been interpreted as solution features (Highways</i></p>	<p>The Applicant has already considered pit-like features / sinkholes / solution hollows in its assessments [APP-044; APP-195]. The Applicant notes that all of those identified within the 2020 SHLP paper (Gaffney et al. 2020, figure 9), as well as similar and smaller features within the DCO boundary, have been identified by the Applicant with reference to its own geophysical surveys and its archaeological trial trenching [see REP1-045 &amp; 046; REP1-042 &amp; 043; REP1-049 &amp; 050; REP1-</p>



*Agency 2019a, 5.1.9; 2019b, 203). Despite this, no comparable group of features have been reported from this extensive dataset, and currently the alignment of features at Durrington is unique. The character and significance of the remaining features, and their distribution, awaits detailed investigation.*

The arcs of pits around Durrington Walls is not so much a single 'discovery' from one episode of fieldwork (as several other SLHP results are) but is the result of piecing together the results of a number of quite different projects and challenging previous assumptions about these features being ploughed-out barrows, circular banks or natural swallow holes.

Despite previous excavations of very large pits and shafts (as cited by Gaffney et al) – including the Wilsford Shaft – such large-scale features detected by air photography or geophysics have often been assumed to be of geological origin or the remnants of upstanding monuments reduced to a thicker area of magnetic and/or moisture retentive soil reflected in crop-marks or detectable by geophysics. Apart from quoting several parallels from elsewhere (mostly rather smaller features) and the Wilsford shaft, the *Internet Archaeology* paper presents a map of especially large (5m+ anomalies detected by geophysics amongst a large number of surveys, including those carried out by the Applicant for this scheme.

However, these have been selected as “*probable and potential features over 5m in diameter.*” This leaves a far greater number of anomalies of smaller size – which would be more typical of other very large pits and shafts cited in

051]. As noted in its overarching response addressing the ‘new discovery’ submitted to the Secretary of State on 13th August, the Applicant considers that “the interpretation” of the features cited by Mr Garwood as “of natural origin (but containing cultural material) is sound, based on the evidence from the evaluations. As far as any additional or wider interpretation that might be entertained in light of the recently published discovery, the interpretation as natural features does not preclude anthropogenic modification and the mitigation strategy for the Scheme allows flexibility to investigate and interpret such features further.” [TR010025-001981, para. 6.2.2].

The Applicant’s archaeological evaluation results, combining non-intrusive geophysical surveys, ploughzone artefact sampling and testing by trial trenching, form a robust baseline on which to make assessments of the impacts of the Scheme upon archaeological remains [see the written summaries of the Applicant’s oral submissions made at hearings on 5 and 6 June 2019, REP4-030, items 5 (i) and (ii)]. The robustness of the evaluation strategy is demonstrated by the approval by Wiltshire Council and (for sites within the WHS) HMAG of the AESR, OWSI and individual SSWSIs; and by the monitoring of the implementation of the strategy on site and approval of the resulting evaluation reports. With regard to “myriad [...] geophysical anomalies of smaller scale”, “trial trenching provided the opportunity to assess the presence of [...] smaller features as well as to verify the interpretations of the geophysical anomalies more generally and allow an assessment of the numbers and nature of archaeological features likely to be



the *Internet Archaeology* paper. It also leaves out more irregular or less strongly magnetised anomalies that may disguise archaeological material. The magnetic signature of the southern arc of pits is distinctive, but at a smaller scale could easily be missed [See Figure 1a].

RECOMMENDATION: The Secretary of State should be aware of the similar features identified by the Internet Archaeology paper within or close to the DCO landtake that would be impinged upon by the development and may not have been recognised for what they are, but also the myriad of geophysical anomalies of smaller scale, many recorded as ‘possible archaeology’, others dismissed as natural geology or tree-throw holes that may include comparable misunderstandings. Much wider implications arise from how Gaffney et al have challenged previous assumptions, including widely contrasting interpretations, that previously inhibited the new hypothesis. Such assumptions have become baked into methodologies of survey, evaluation and investigation, hindering reliable evidence of the nature and significance of such features.

present” [TR010025-001981, para. 2.4.2c]. There was “a good correlation between the geophysics results and the trial trenching results across the Scheme” [TR010025-001981, para. 2.4.4]. The suitability and comprehensiveness of the evaluation programme were confirmed in evidence by the County Archaeologist, Ms Pomeroy Kellinger on behalf of Wiltshire Council [REP4-030, items 5 (i) and (ii)]. It is clear therefore that there is no deficiency in the scope or execution of the evaluation strategy. The Applicant stands by its comprehensive and robust evaluations as indicated by Historic England’s recent assessment of the Applicant’s geophysical surveys in its submission dated 13th August 2020 [TR010025-001972].

The Applicant acknowledges that the interpretation of the WHS landscape and its wider context is the subject of constantly evolving debate. The reflexive and iterative nature of the DAMS provides ample scope to address discoveries during the mitigation programme, test hypotheses, and take account of emerging discoveries, theories and understanding of the landscape. The DAMS [TR010025-001951] and its Archaeological Research Agenda (ARA) provide mechanisms to ensure a flexible response to the archaeological resource that address relevant research questions. The approach of the DAMS is based on developing site-specific research questions and focusing site decision-making on addressing these. The DAMS provides ample scope to address discoveries during the mitigation programme, and to take account of emerging discoveries and theories within and in the vicinity of the WHS. The DAMS [TR010025-001951] incorporates strategies for the



excavation and recording of discrete natural features that contain cultural material [para. 6.3.42], buried ground surfaces [para. 6.3.43], tree hollows [paras. 6.3.49–51] and a strategy for geoarchaeological investigation of natural deposits and sequences [para. 6.7]. The features that are therefore of concern to the CBA are all covered in the DAMS.

Wiltshire Council and Historic England consider that the DAMS and its ARA provide an appropriate basis for development of site-specific research questions and SSWSIs. Historic England's closing submission [AS-111] confirms, "We believe that the dDCO, OEMP and DAMS set out a process to ensure that heritage advice and considerations can play an appropriate and important role in the construction, operation and maintenance of the Scheme [...] we consider sufficient safeguards have been built in for the detailed design stage". As confirmed in Historic England's response to the Secretary of State on 13th August, with regards to the DAMS [TR010025-001951]:

*"In our opinion the provisions in the Detailed Archaeological Method Statement (DAMS) are sufficient to enable the Site Specific Written Schemes of Investigations (SSWSIs) to draw on the implications of the SHLP research in finalising the detailing of the programme of archaeological mitigation should the Scheme be granted consent. Safeguards have been included within the DAMS and Outline Environmental Management Plan (OEMP) to facilitate the integration of*



*the matters raised by the research into the approach taken to the Scheme.”*

The Applicant further details the fitness for purpose of the DAMS in their Overarching Response addressing the ‘new discovery’ [TR010025-001981, section 5].

With regard to the point about the paper challenging previous assumptions, the Applicant notes that the interpretation of monuments, areas and sites in the Stonehenge landscape have been, and continue to be, subject to a wide range of disparate theories, speculations and interpretations which have competed, changed and in turn inspired further hypotheses over the course of hundreds of years. This very aspect gives rise to the seventh Attribute of OUV of the WHS: 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. The Applicant acknowledges that the interpretation of the WHS landscape is the subject of a constantly evolving debate. As explained in the Applicant’s Overarching Response addressing the ‘new discovery’ [TR010025-001981], the Applicant has provided EIA and HIA Addenda [TR010025-001979 and TR010025-001980] with regards to the ‘new discovery’ and its contribution to expressing attributes of OUV, to ensure that it has been robustly assessed in the context of the WHS. The Applicant has assessed the significance of the ‘new discovery’ taking the published evidence at face value, and thereby assuming that they contribute to conveying attributes of OUV and add to our understanding of large-scale prehistoric landscape organisation (i.e. accepting, for the purposes of a worst case assessment, that the challenges to any assumptions in the SHLP paper are correct). These Addenda conclude that no new Likely Significant Effects have



		<p>been identified or changes to the overall conclusions regarding the impact of the Scheme on the ‘new discovery’, stated interrelationships, contribution to expressing Attributes of OUV and the WHS as a whole following the ‘new discovery’. The DAMS [TR010025-001951], developed in consultation with members of HMAG and with input from the Scientific Committee, captures current research questions and thinking; the reflexive and iterative nature of the DAMS provides ample scope to address discoveries during the mitigation programme, and to take account of emerging discoveries, theories and understanding of the uses and development of the WHS landscape.</p>
9.4	<p><b>1b The “Representations Relating to the Archaeological Find at the World Heritage Site”</b></p> <p>The representations already made by others to the Secretary of State about the discoveries reported in the <i>Internet Archaeology</i> paper rightly stress the potential importance of the features and how they may alter understanding of multiple monuments and their settings and relationships to each other and to local topography. Most obviously they affect what contributes to the setting of Durrington Walls henge monument and its relationships in time and space to other monuments such as the newly discovered causewayed enclosure at Larkhill and (more relevant to the scheme) its relationship to monuments and topography on the west side of the Avon Valley.</p>	<p>The Applicant notes that all the pit-like features / sinkholes / solution hollows identified within the 2020 SHLP paper (Gaffney et al. 2020, figure 9) within the DCO boundary have been identified by the Applicant with reference to its own geophysical surveys and its archaeological trial trenching. The main ES [APP-044] and main HIA [APP-195, paras. 5.10.22–28] submitted with the application have considered known Neolithic pits published prior to September 2018 as part of the assessment. These include those published in Gaffney et al. 2018 Durrington Walls and the Stonehenge Hidden Landscape Project 2010-2016. <i>Archaeological Prospection</i>. 25(3): 255-269 [<a href="https://doi.org/10.1002/arp.1707">https://doi.org/10.1002/arp.1707</a>], which were referred to in Paul Garwood’s presentation on behalf of the Consortium of Archaeologists &amp; Blick Mead Project Team during oral submissions put at Cultural Heritage hearings at the hearing on 21 August 2019 [TR010025-001064]. These submissions were responded to in oral evidence given at the hearing [see written summary, REP8-016, item 5.1 (ii)]. The archaeological evaluation undertaken for the Scheme did identify and</p>



These representations have also highlighted how the *Internet Archaeology* paper has drawn attention to other major hollows/pits, including some within the land-take of the A303 proposals that may have been too readily dismissed as natural features of no archaeological interest.

They have also drawn attention to how these discoveries highlight and emphasise various shortcomings in the baseline archaeological surveys and its reporting.

They have also raised concerns about shortcomings of the Baseline report, field surveys and evaluations and the DAMS including the sampling strategy. They allude to the point that the *Internet Archaeology* paper did not seek to map innumerable smaller scale features of similar uncertain character which similarly may have been too readily dismissed as having little or no archaeological interest, or misinterpreted as

investigate the large pit-like features within the Scheme boundary that are cited in the paper [as detailed in TR010025-001981, section 2.5]. The Applicant considers that the interpretation of the features as of natural origin (but containing cultural material) is sound, based on the evidence from the evaluations [see REP1-045 & 046; REP1-042 & 043; REP1-049 & 050; REP1-051]. As noted in the Applicant's Overarching Response, "The evidence from the evaluation suggests that none of the three examples is likely to be a non-natural feature: that the features contain anthropogenic or cultural material does not of itself require a non-natural origin for the features. The evaluation reports, the ES, HIA and DAMS take full account of the potential for such features to contribute to understanding of human activity." [TR010025-001981, para. 2.5.9]. The recent publication/discovery does not change this conclusion.

With regards to the comprehensiveness of the archaeological evaluation surveys please see the response to Point 9.1 above. With regards to the sampling strategy and the DAMS [TR010025-001951], both of which are considered robust and fit for purpose, the Applicant has responded to this extensively at Examination [see REP8-013, paras. 2.1.3, 2.1.4 and 2.1.8 (in response to the CBA); para. 6.3.4 (in response to the Stonehenge Alliance), paras. 10.1.8–10.1.17 and 10.1.21–10.1.22 in response to Paul Garwood and 13.1.1–13.1.4 in response to the Blick Mead Project Team; see also REP9-022, paras 18.2.1–18.2.3 and 18.2.5–18.2.7 in response to the CBA].



other kinds of feature.

They emphasise the importance of giving far more weight to the potential significance of large hollows, sinkholes, solution hollows and the like, as well as large deliberately dug features as foci for cultural activities, and as repositories of unusually well-preserved activity areas.

In referring to key policy issues, they stress the need for reconsideration of the implications for the scheme, not just of the proposed Massive Pit Structure itself but also in relation to the wider implications of uncertainties that arise in relation to the reliability of baseline surveys and interpretations, impact and risk assessment, and whether the DAMS is adequately designed to address such issues. Many of these wider implications of the circumstances of discovery and interpretations and its knock-on effects have already been raised in the Examination, but are now illustrated in even more tangible and telling ways.

In relation to “the reliability of baseline surveys and interpretations, impact and risk assessment”, the Applicant maintains that its archaeological surveys, evaluation and assessments are robust. The cultural heritage chapter of the ES [APP-044] and the HIA for the Scheme [APP-195] are carefully evidenced pieces of work; the Applicant’s HIA deals with the wider context at length, including spatial, topographic and chronological relationships; inter-relationships and contextual associations between individual assets, Asset Groups and areas; and the articulation of the wider prehistoric landscape. The HIA considers the wider impacts of the Scheme upon the Attributes that convey the OUV of the WHS, its Integrity and Authenticity in extensive detail [APP-195, sections 6 & 9–12]. Historic England also noted that the HIA was thorough and broadly concurred with the assessment in the HIA in its application of the ICOMOS 2011 guidelines [TR010025-001972] and the overall assessment conclusions. In particular, Historic England stated in that submission (para. 2.4.10): “We consider that the assessments conducted under the Scheme were sufficiently rigorous to inform determination of the Scheme and development of an appropriate and proportionate archaeological mitigation strategy. The recently published research does not change our view of those assessments.”

The ‘new discovery’ has been assessed by the Applicant in the ES and HIA Addenda [TR010025-001979 and 010025-001980] submitted by the Applicant on 13 August 2020. These conclude that no new Likely Significant Effects have been identified and No Change to the overall conclusions of the HIA [APP-195] or changes to the overall conclusions regarding the impact of the



The representations also raise key policy and regulatory issues directly relating to the proposed Massive Pit Structure and its implications for other comparable (and smaller) features, including regulatory requirements and procedural issues.

Scheme on the discovery, stated interrelationships, contribution to expressing Attributes of OUV of and the WHS as a whole following the 'new discovery'.

As confirmed in Historic England's response to the Secretary of State on 13th August, with regards to the DAMS [TR010025-001951]: *"In our opinion the provisions in the Detailed Archaeological Method Statement (DAMS) are sufficient to enable the Site Specific Written Schemes of Investigations (SSWSIs) to draw on the implications of the SHLP research in finalising the detailing of the programme of archaeological mitigation should the Scheme be granted consent. Safeguards have been included within the DAMS and Outline Environmental Management Plan (OEMP) to facilitate the integration of the matters raised by the research into the approach taken to the Scheme."*

The 'new discovery' does not raise any issues with regard to compliance with the World Heritage Convention (WHC). The Scheme does not breach the WHC and is in full compliance with the UK's international legal obligations. In light of the conclusions presented in the HIA Addendum and ES Addendum, it is clear that the Scheme conforms with the NPSNN. The Applicant has responded to this point previously with regards to compliance with the requirements of the World Heritage Convention and planning policy in its response the Examining Authority's Written Question G.1.1 [REP2-021], the Applicant's Comments on Written Representations [REP3-013], particularly paragraphs 21.4.8–16 in response to the Council for British Archaeology and paragraphs 60.2.33–36 in response to

The Stonehenge Alliance raises wider issues of balance and strategic environmental issues (including changing perceptions of the need for infrastructure; climate; and the lack of Strategic Environmental Assessment of the RIS2 programme of highways developments). The implications of the *Internet Archaeology* paper raise

the Blick Mead Project Team, its Written Summaries of oral submissions at Cultural Heritage Issue Specific Hearings (ISH2) [REP4-030] (specifically Agenda Items 3(i), 3(v), 3(vi) and Appendix A to that document), item 11.2.25 in response to the Stonehenge Alliance and items 34.1.47–62 in response to the Consortium of Archaeologists of the Applicant's response to comments submitted at deadline 4 [REP5-003], and particularly in response to agenda items 3.1(i) and 3.2(ii) of the Written Summary of Oral Submissions put at Cultural Heritage, Landscape and Visual Effects and Design Hearing on 21 August 2019 [REP8-016].

In terms of 'regulatory requirements and procedural issues', the CBA representation has failed to explain what is being referred to. As set out in the Applicant's Overarching Response [TR010025-001981, Appendix A] submitted on 13 August 2020, all interested parties will have had a full opportunity to be consulted and submit representations/evidence as they consider appropriate on the issues at hand, including on the Applicant's submissions of 13 August.

The Applicant has responded to the Stonehenge Alliance's submission, as appropriate, in a separate part of its response.

The Applicant has assessed the 'new discovery' in its ES and HIA Addenda [TR010025-001979 and TR010025-001980]. These conclude that no new Likely Significant Effects have been identified or changes to the overall conclusions regarding the impact of the Scheme on the 'new discovery', its stated



	<p>matters of additional harm and risk of harm to be seen in the context of the overall objectives of the scheme (as supposedly ‘heritage led’) and the Applicant’s own assessment of it delivering only a marginal net benefit for the WHS.</p> <p>RECOMMENDATION: The Secretary of State should recognise that these representations raise valid concerns that we share and – as already indicated by this consultation process – should take them seriously and give due weight to the arguments advanced.</p>	<p>interrelationships, its contribution to expressing Attributes of OUV and the WHS as a whole. The Applicant has assessed the impact of the Scheme on the attributes of OUV and concluded that, overall, the Scheme would sustain the OUV of the WHS and have a slight beneficial effect on the WHS as a whole. The Applicant has considered the degree of harm to heritage assets as required for the purposes of the NPSNN, and, given its assessment of impact on the WHS and its OUV, does not consider substantial harm would be caused to the WHS.</p> <p>The Applicant has set out in detail in its submissions to the Examination and, in respect of the proposed “new discovery” its 13 August submission and this submission, why the concerns of the CBA are not justified and therefore should not have any significant weight attached to them.</p>
9.5	<p><b>ISSUE 2 IMPLICATIONS OF THE ARCHAEOLOGICAL FIND FOR THE DEVELOPMENT AND ANY HARM IT MAY CAUSE TO THE WORLD HERITAGE; AND....</b></p> <p><b>2a Implications of the ‘massive pit structure associated with Durrington Walls henge’ for the A303 development:</b></p> <p><b><i>Physical effects</i></b></p>	<p>As stated in the Applicant’s Overarching response [TR010025-001981] “To aid the Secretary of State, the Applicant has nevertheless taken the preliminary conclusions of the publication on the discovery at face value and considered them in Addenda to both the ES and the HIA for the Scheme that specifically consider the discovery and its significance, its contribution to the Attributes, Integrity and Authenticity of the WHS, and the impact of the Scheme on the Durrington Walls discovery and on the OUV of the WHS as a whole.”</p> <p>The Applicant has assessed the setting of the discovery and its contribution to its significance in its addenda to the ES and the</p>



The southern arc of the proposed Massive Pit Structure and associated post/pit alignment identified by Gaffney et al is c.200m from the northern DCO boundary and would not be physically impinged upon by the scheme.

### **Setting effects**

The proximity of the southern arc of pits to the DCO boundary means that it is well within the 500m baseline corridor which was chosen as the methodological basis for assessing impacts on setting together with selected major monuments at a greater distance [APP-044 ES Ch 6 paras 6.5.1-6.5.3]. A number of considerations arise –

- The relationship of the arcs of the proposed Massive Pit Structure to the post alignments and rectangular enclosure set just within its perimeter.
- The scale of Massive Pit Structure monument proposed by Gaffney et al – up to 2.3km across, with its S arc 1.6km long, N arc 1.45km and as yet unconfirmed W arc c.1.375km long (potential total 4.5 km) – which make it a feature of truly landscape-scale comparable with major linear landscape-scale monuments such as the Great Cursus (2.8km long) and the Avenue (2.6km long).

HIA submitted on 13th August [TR010025-001979, paras. 5.3.7-8 and TR010025-001980, paras. 3.3.22–26]. This covers the considerations listed by the CBA. The HIA Addendum “Considers the temporal and spatial relationships of the ‘new discovery’ with known archaeological assets and Asset Groups, visual relationships and inter-visibility, geological and topographical aspects, landscape layout and astronomical alignments of the WHS” [...] “This includes assessment of the setting and relationships between the monuments within the visual envelope of the WHS” [TR010025-001980, paras. 2.8.1–2]. This HIA Addendum considers potential associations and interrelationships with other monuments and areas in the Stonehenge landscape stated in the SHLP paper and noted in the CBA’s response, including Stonehenge; the Avenue; Durrington Walls, Woodhenge and Associated Sites, including Durrington Avenue; Larkhill Causewayed Enclosure; Coneybury Henge and Associated Monuments; Wilsford Shaft; the Greater Cursus; barrows, including the Countess barrows; and discrete and isolated pit-like features, solution hollows/ sinkholes/ dolines [TR010025-001980, paras. 3.3.12–19] – including large pit-like anomalies located close to the DCO boundary and within the WHS [TR010025-001980, section 4].

The Applicant would also point the Secretary of State to submissions made by Historic England [TR010025-001972], Wiltshire Council [TR010025-001968], the National Trust [TR010025-001949] and English Heritage Trust [TR010025-001970] as to the evidence base for the ‘new discovery’ and its significance.



- As a major landscape-scale 'monument', it would potentially have been intended to be appreciated not only as part of the complex of monuments, but possibly defining an area of land of as-yet unexplained significance around Durrington Walls that was seen as different from its surroundings.
- Its intimate association with Durrington Walls henge, and predecessor monuments (including whatever the pits beneath its banks may have represented).
- Its relationship to other monuments such as the timber circles within Durrington Walls and at Woodhenge.
- Its as yet undefined relationship to the River Avon and especially the loop in its course that occupies the area immediately SE of Durrington Walls;
- The relationships between these monuments and their location, together with numerous nearby barrows and barrow clusters around the S arc of pit-features along the W side of the Avon valley.

The S arc of the proposed Massive Pit Structure and the parallel pit/post alignment are not readily visible as

The Stonehenge Avenue may have provided a formal approach to Stonehenge, linking it with the River Avon at West Amesbury and the West Amesbury Henge. Recognising its significance,



surface earthworks (though some features have been visually manifest as cropmarks). Appreciation and understanding of them in their surroundings (ie their 'setting' as defined by National Policy) is therefore comparable with the non-visible part of the Avenue to which we drew attention in evidence presented to the Examination as having been given insufficient weight [REP2-070 paras 50 to 52, 61, 63; [REP3-049](#) page 7 *Question CH.1.44 (Treatment of the Avenue)*]. Such monuments may not currently be visible on the ground, but they can still be appreciated from combining observation of the landscape with other guidance to show where they are located. As with the Avenue, their presence in the landscape (where not built over) could in principle be made more manifest.

As with the Avenue and almost all other monuments in the WHS, its relationship with other monuments and what that may have meant also involves an appreciation of their relationship to the natural topography. As with the Avenue and Durrington Walls, the River Avon may have been a critical aspect of this.

the eastern portal has been positioned east of the Avenue to enable the reconnection of the Avenue. The Avenue is currently severed by the existing A303, and the Scheme will facilitate its reconnection [REP2-025, Question CH.1.44; REP3-013, para. 12.1.5]. The Applicant agrees that non-visible assets still have a setting that must be considered and has done exactly that, thoroughly and taking a precautionary approach, in the ES, HIA and the Addenda, therefore giving the non-visible assets all due weight. The lack of surface expression for the 'new discovery' makes it comparable with the Countess Farm Barrows, which have no surface expression (no visible earthworks), rather than the Avenue which has surface expression (visible earthworks) over part of its alignment. The ES and HIA Addenda note that this "greatly reduces their superficial legibility" [...] "an archaeological setting –appreciable through aerial photography, mapping and digital survey plots – does exist." [...] and "The 2020 SHLP paper concludes that the strength of relationships with other monuments lies in the positioning of the features at a broadly similar distance from Durrington Walls Henge, rather than in its visual relationships." [TR010025-001979, paras. 5.3.7–8; TR010025-001980, paras. 3.3.22– 3.3.25]. The ES Addendum notes that "Impacts here are fairly limited, due to the separating distance, the dominating presence of the existing A303, the low baseline quality of the setting and the intervening topography (the Eastern Portal being situated in a dry valley)." The use of the retained cutting, the canopy and the positioning of the portal in a dry valley in the landscape will limit the impacts to the setting and therefore the low contribution this makes to



the significance of the 'southern arc' of anomalies. The Scheme will not entail the severance of any stated relationships either. A Neutral effect is assessed for all of the 'southern arc', derived from No Change to potentially Very High value assets. The Avenue, including its setting and how movement / traversing along it contributes to its significance, is carefully considered in both the setting assessment [APP-218, pages 66–68] and the HIA [APP-195, pages 354–356], where beneficial effects are predicted as a result of the Scheme. The Cultural Heritage Setting Assessment [APP-218] has been undertaken in line with Historic England's 2017 Good Practice Advice on managing change within the settings of heritage assets, including advice on understanding setting, and how it may contribute to the significance of heritage assets and allow that significance to be appreciated, as well as advice on how views contribute to setting.

The Applicant has responded to the CBA's previous submissions [REP2-070 paras. 50 to 52, 61, 63; REP3-049, page 7, Written Question CH.1.44] in its responses to examination [see REP3-013 and REP4-036, para 13.1.8].

The Applicant refutes the CBA's comment that 'insufficient weight was given to topography as a crucial part of the setting of monuments affected by the Scheme'. Topography was a key consideration of the setting of heritage assets and Asset Groups (see the Cultural Heritage Setting Assessment [APP-218, paras.

We have stressed how in general insufficient weight was given to topography as a crucial part of the setting of monuments affected by the scheme, especially

- the monuments around the Winterbourne Stoke Crossroads (including monuments both inside and outside the WHS) [REP2-070 para 69;



- REP6-085 pp.57062];
- the landscape-scale monuments between King Barrow Ridge and the Avon ( the of Avenue, Vespasian's Camp, the Amesbury Abbey Park and wider designed landscape (and the Blickmead site) [REP6-084 pp.16-24].

The key point in each case is that surface parts of the route, especially the cuttings and tunnel portals massively increase the physical alteration of the landform of the WHS and its setting in locations where this is a key factor in appreciation of how major features of the WHS relate to each other and their topographic setting [REP2-070 para 61, 69; REP2-075 paras D12-D16].

In the case of the proposed Massive Pit Monument, the effect relates to the topographic space between two major landscape-scale monuments represented by the Avenue

2.6.1, 3.6.5–7 and 3.6.8–10] and Heritage Impact Assessment [APP-195, section 6.2)).

With regards to the monuments around the Winterbourne Stoke Crossroads, the Applicant has previously responded to the examination on these points at Issue Specific Hearings [REP4-030, item 6]. With regards to sites, monuments and the Registered Park and Garden and their setting between King Barrow Ridge and the Avon, the Applicant has responded to these points during examination at REP6-022, Question 2.8 and REP8-013, para. 2.1.7].

As set out in Environmental Statement Appendix 6.9, Cultural Heritage Setting Assessment [APP-218, para. 3.6.7] “In terms of assessment outcomes, the removal of any modern elements that sever the landscape is seen as beneficial to archaeological setting. Conversely, physical damage to archaeology, or the introduction of new severance, is seen as negative.” Physical alteration of the landform by cuttings and tunnel portals is therefore considered in the setting assessment and in the conclusions of the ES and the HIA on the effects of the Scheme on cultural heritage, landscape and the WHS (on which the HIA concludes that the Scheme has overall, taking into account the portals, cuttings and the removal of the road from the central part of the WHS) a Slight Beneficial Effect on the WHS and sustains the OUV).

See above with regards to the Applicant's responses at examination to the impact of the Scheme on sites, monuments and the Registered Park and Garden and their setting between King Barrow Ridge and the River Avon. The Applicant notes that



and the S arc of the Durrington pit-features, which lie either side of the complex of dry valleys defining and extending to the north and north-west from the spur of high ground at the isthmus of a loop in the river Avon. This spur is almost entirely occupied by Vespasian's Camp – another landscape- scale monument, itself lying within a major designed landscape-scale park, walks and estate planting that is a quintessential expression of how landscape architects of the 18<sup>th</sup> to 19<sup>th</sup> century responded to the influences of antiquarian interests in prehistory. As we have previously observed, [REP6-084 pp. 16-24] this complex area of topography was badly affected by the present cutting for the A303, and the new proposals greatly exacerbate that harm, widening the cutting and extending it much further west. This is already much the largest modern anthropogenic interference with the natural topography of the WHS, which otherwise is almost entirely intact, and is at an especially complex and significant place.

the existing A303 surface road currently severs the Avenue and has a Large Adverse effect on this scheduled monument. In comparison the Scheme will result in a Large Beneficial effect on the Avenue [see the HIA, APP-195; pages 354–356] through the removal of the existing severance caused by the current A303, the removal of much of the existing aural and visual intrusion of traffic on the A303, the restoration of the physical connectivity where it is currently severed by the A303, and improve the integrity and setting of the monument.

The Applicant does not agree that the Scheme will “exacerbate” the harm caused by the existing A303. The Scheme has been carefully and sensitively designed as far as possible to reduce the impact of the current road and its existing cuttings and hide the portal with a grassed canopy. The portal entrance has also been positioned within the head of a dry valley to further utilise the existing landform to conceal it and the new section of road as far as possible in views from Asset Groups such as the Avenue, the Avenue Barrows, the Countess Farm Barrows, Vespasian's Camp and the Registered Park and Garden. The Scheme also enables the existing A303 surface dual carriageway from Stonehenge Road to Vespasian's Camp to be removed and replaced by chalk grassland.

As set out above, the Avenue, including its setting and how movement / traversing along it contributes to its significance, is carefully considered in both the setting assessment [APP-218, pages 66–68] and the HIA [APP-195, pages 354–356]. 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,



The present A303 already affects the setting of Vespasian's Camp and the Amesbury designed landscape in a substantial cutting and crosses The Avenue. The relative proximity of the S arc of the Durrington 'Massive Pit Structure' (as another landscape-scale complex of likely national importance) adds to the cumulative harm of the proposed scheme, significantly exacerbating physical intrusion into the natural topography of the WHS. As we

King Barrow Ridge and the Countess Farm barrows. The positioning of the eastern tunnel portal, the removal of the current severance of the Avenue and the re-connection of its line across the course of the former A303, the removal of much of the existing aural and visual intrusion of traffic on the A303 and improvements to the integrity and setting of the monument are assessed as resulting in a Large Beneficial effect on AG27 the Avenue in the HIA [APP-195, para. 9.3.68] and a permanent large beneficial effect in the ES [APP-044, table 6.11]. The portal's position to the east of the Avenue allowing for the reinstatement of its route aligns well with policy 3e of the 2015 WHS Management Plan [REP3-013, paras. 24.2.21–23].

The Addenda to the ES [TR010025-001979] and HIA [TR010025-001980] confirm that the 'new discovery' results in no changes to the effects as originally assessed. The impacts of the Scheme on the 'new discoveries' have been assessed in those documents submitted to the Secretary of State on 13th August 2020, and remain as previously reported.

The Applicant disagrees with the CBA's view that '*the relative proximity of the S arc of the Durrington "Massive Pit Structure" (as another landscape-scale complex of likely national importance) adds to the cumulative harm of the proposed scheme*'. The Applicant has assessed the impacts of the Scheme on the discoveries in the Addenda to the ES and the HIA [TR010025-001979 and TR010025-001980] and found that there will be no new Likely Significant Effects and that the overall impact on the OUV of the WHS remains unchanged.



have explained in evidence, this effect has already been badly underestimated, both as a generic issue [REP2-070 paras 50-61; REP2a-005 page 6, Question CH.1.23 (In-combination effects)] and specific to the eastern tunnel approach and portal [REP6-084 pp. 16-24]. A key consideration here is the cumulative nature of the harm – both in terms of the number and landscape-scale monuments and the exacerbation of previous harm caused by the original 1960s cutting of the A303 through this area of sensitive topography.

As previously stated – and now reinforced – not only was the nature and significance of the relationship of these monuments (and Blickmead) to their settings badly misconstrued in the EIA/HIA, but the cumulative significance of the harm caused by the widening and lengthening of the cutting up to the E portal was also ignored, both with regard to the number and sensitivity of landscape-scale monuments contributing to the OUV of the WHS, but also how the proposals would seriously exacerbate rather than reverse the harm already caused by the 1960s scheme [REP6-084 pp.16-24]. We also pointed out in evidence that the potential to reverse this entirely if a route such as the more affordable F010 were chosen was not considered in weighing up the alternatives [REP3-050 para 20-23].

**RECOMMENDATION:** The Secretary of State may reasonably conclude that the ‘Massive Pit Structure’ proposed by Gaffney et al, would not be physically

The Applicant does not consider that it has “badly underestimated” the effects of the Scheme nor, clearly, did it ignore the nature of the Scheme in its consideration of cumulative effects. The Applicant has already responded in detail at examination to these arguments by the CBA [see REP3-013 and REP8-013, paras. 2.1.7 and 2.1.28].

With reference to the settings of heritage assets and Asset Groups in and around the Eastern Portal, the Applicant has considered these points previously and provided responses to examination with regards to the CBA’s assertions [REP8-013, para. 2.1.7].

With regards to the weighing up of alternatives in relation to route F010, the CBA is mistaken. The Applicant responded to the CBA’s assertions in its response to Examination [REP4-036, paras. 13.1.22 and 13.1.23].

The Applicant has considered the effects of the Scheme on the ‘new discovery’, taking the conclusions of the paper proposing it at face value, and its setting and the contribution that this makes to the significance of the asset, in the Addenda to the ES and the HIA [TR010025-001979 and TR010025-001980]. Even if



	<p>damaged by the scheme. Equally, he should conclude that its setting IS an issue which, for such a major landscape-scale monument, he should not interpret too narrowly. The issue needs to be considered in the context of the OUV issues of the spatial, chronological and cultural relationships between monuments and with the natural topography and features of the landscape (including the River Avon). Of particular relevance is the currently underestimated cumulative harm the proposed scheme would have by exacerbating the damage already caused by the existing 1960s road to other landscape-scale monuments in the vicinity of the eastern approach to the tunnel and its portal.</p>	<p>those conclusions are valid, then, the effects of the Scheme are as already reported in the ES and HIA. We would however also point the Secretary of State also to the submissions of Wiltshire Council [TR010025-001968] and the National Trust [TR010025-001949] as to the evidence base for the 'new discovery' and the significance of the discovery.</p> <p>The Applicant has responded to the assertions of the CBA regarding cumulative harm (see above).</p>
<p>9.6</p>	<p><b>2b Implications of the other 5m+ features identified by the <i>Internet Archaeology</i> paper for the A303 development:</b></p> <p>When overlaid on the DCO redline boundary [See Figure 2] it is clear that seven of the other very large pit-like features, shafts, sinkholes identified in fig 9 of the <i>Internet Archaeology</i> paper fall within the land-take area of the scheme with another three very close. Several of these occur in the western part of the route, Parsonage Down and west of the WHS or along its W boundary. Others include one in the area of the western approach to the tunnel, c.375 metres east of the Winterbourne Stoke Crossroads, which was evaluated and interpreted as a solution hole with material of various periods including prehistoric flintwork in its upper fills [REP1-045 paras 5.2.3 to 5.2.12; REP-046 p.26 Fig 11.23, } The Wilsford Shaft<sup>10</sup> lies just S of the western approach c.620metres further</p>	<p>With regard to the “limited testing” of features in evaluation trenches, the archaeological evaluation results, combining geophysical surveys with testing by trial excavation, form a robust baseline on which to make assessments of the impacts of the Scheme upon archaeological remains [see the written summaries of the Applicant’s oral submissions made at hearings on 5 and 6 June 2019, REP4-030, items 5 (i) and (ii)]. The robustness of the evaluation strategy is demonstrated by the approval by Wiltshire Council and (for sites within the WHS) HMAG of the AESR, OWSI and individual SSWSIs; and by the monitoring of the implementation of the strategy on site and approval of the resulting evaluation reports. The Adequacy of the Archaeological Evaluation Strategy is further detailed in the Applicant’s Overarching Response [TR010025-001981, section 2].</p> <p>All the sinkholes / solution hollows identified in the 2020 SHLP paper (Gaffney et al. 2020, figure 9) within the DCO boundary</p>



east. Another feature identified by Gaffney et al lies c.150 metres SW of the eastern tunnel portal. In addition to these, a very large feature interpreted as a solution hole but Mesolithic and later material was found by excavation very close to the eastern approach [REP1-047 paras 5.2.5, 5.5.2, 8.2.2, 8.2.8; REP-048 p.20 Fig 11.18, p.23 Fig 11.21, p. 48 fig 11.45].<sup>11</sup>

As the authors of the *Internet Archaeology* paper observe, “*The character and significance of the remaining features, and their distribution, awaits detailed investigation.*” Because of this uncertainty (and the rather limited testing of such features in evaluation trenches), it is not possible to establish on present evidence what the full implications for the scheme are. What is clear is that it is common for such features to contain significant cultural material.

have been identified by the Applicant with reference to its own geophysical surveys and its archaeological trial trenching. The large pit-like features within the DCO boundary that would be directly impacted by the Scheme were investigated by the Applicant by trial trenching, geoarchaeological boreholes and augering including environmental sampling and scientific dating. The Applicant considers that the interpretation of the features cited by the paper as of natural origin (but containing cultural material) is sound, based on the evidence from the evaluations [see REP1-045 & 046; REP1-042 & 043; REP1-049 & 050; REP1-051]. The recent publication/discovery does not change this conclusion [TR010025-001981, section 6].

As noted in its overarching response addressing the ‘new discovery’ submitted to the Secretary of State on 13th August, the Applicant considers that “the interpretation” of the features cited by Mr Garwood as “of natural origin (but containing cultural material) is sound, based on the evidence from the evaluations. As far as any additional or wider interpretation that might be entertained in light of the recently published discovery, the interpretation as natural features does not preclude anthropogenic modification and the mitigation strategy for the Scheme allows flexibility to investigate and interpret such features further” [TR010025-001981, para. 6.2.2]. The ES Addendum notes, “This continuum and the mutual influence of nature and culture are important. Like the Main ES [APP-044], the Main HIA [APP-195] and the HIA Addendum, this ES Addendum takes a nuanced approach, preferring the concept of a wide spectrum, a continuum and mutual influence and interplay between nature and cultural aspects, rather than labelling features into purely ‘natural’ or purely ‘anthropogenic’.” [TR010025-001979, para. 4.1.2]. The HIA notes, “There is a continuum between natural features and human activity in the



landscape. Natural geological and topographic features are fundamental in structuring landscapes. These blurred boundaries are common and not unexpected in the Stonehenge landscape, which demonstrates cultural development related to natural features, and the influence of 'natural' aspects – from the underlying geology to horizon views and astronomical alignments – on the layout, distribution, density, organisation, sequence and inter-relationships of monuments and each other, and monuments and the landscape.” [TR010025-001980, para. 2.9.1 & sqq].

The investigation and recording strategy for such features, including provision for systematic palaeoenvironmental sampling and scientific dating, is set out in the DAMS [TR10025-001951] and will be expanded within the relevant SSWSIs to be prepared by the archaeological contractor and approved by Wiltshire Council (in consultation with Historic England and for sites within the WHS, HMAG). As noted in the Applicant’s overarching response submitted in August, “The DAMS [TR10025-001951] already provides for the investigation of these and other such features, where impacted by construction. [DAMS] Paragraph 6.3.42 states [...], “Within the WHS, pits, post-holes and other isolated features (including natural features that have been shown to contain archaeological remains) will be completely (100%) excavated (unless otherwise agreed in consultation with Wiltshire Council, Historic England and, for sites within the WHS, HMAG). Outside the WHS, these types of feature will normally be completely (100%) excavated (unless otherwise agreed in consultation with Wiltshire Council, Historic England and, for sites within the WHS, HMAG as part of the iterative process) (see paragraph 6.1.24 and section 8.1); half-sectioning of features may be adopted, in consultation with Wiltshire Council, subject to the significance of the remains and the



The landscape-scale monument proposed by Gaffney et al stands out as quite different from the distribution of other large pit-like anomalies, for which many different interpretations of the geophysical signatures may still be valid and need testing. But as they note, the spatial relationship of such features relative to the Cursus is suggestive, and even if most are natural features, their role and influence in the prehistoric landscape may yet be much more significant than is yet appreciated. The substantial body of finds of different periods found in such features are of significance even if they originated as natural solution hollows. Features such as the Wilsford shaft (combining a deep artificially dug well or ritual shaft with a suspected pond barrow) and the form of other pond barrows may indicate a much less clear distinction between natural and artificial holes in the

research questions identified in the SSWSIs. The significance of the remains and their potential to contribute to the OUV of the WHS will be considered in consultation with Wiltshire Council and Historic England (and, for sites within the WHS, HMAG) in determining the sample size to be excavated. This DAMS provision ensures that solution hollows or other natural features encountered during the mitigation programme and shown to contain archaeological remains will be subject to archaeological investigation.” [TR010025-001981, para. 5.4.3–4].

The AG23 Greater Cursus is located to the north of Stonehenge and the Scheme. The impacts of the Scheme on the AG23 Greater Cursus and the pit-like features that it contains are considered in the main HIA [APP-195, pages 306–316], where it concludes that the Scheme will have a Large Beneficial effect on this Asset Group.



ground for prehistoric communities than modern scientific categorisations would suggest.

However, if the myriad of smaller geophysical anomalies are considered, these considerations go much further than the 5m+ features that Gaffney et al consider in seeking to show how their proposed Massive Pit Structure stands out from the distribution of other large anomalies. Some at least could have been misinterpreted through application of similar assumptions to those that have been challenged by Gaffney et al in identifying their proposed Massive Pit Structure. Even if many or most features of this kind are natural, many could be hybrid (including some of those trial trenched where burials were found) or important repositories of cultural material, including deposits stratified through time.

**RECOMMENDATION:** Beyond the 'Massive Pit Structure' proposed by Gaffney et al, the Secretary of State should be careful not to limit any review to just the 5m+ diameter features that they have plotted. The assumptions and interpretations they challenge in reinterpreting those features may also apply to many others not limited to those of notably large dimensions,

With regard to the “the myriad of smaller geophysical anomalies”, see the Applicant’s response at Point 9.3 above where the CBA make the same point. As noted at Point 9.4 above, the archaeological evaluation undertaken for the Scheme did identify and investigate the large pit-like features within the Scheme boundary that are cited in the paper, as well as identifying and ground truthing a wide range of smaller features via geophysical survey and trial trench evaluation. The Applicant considers that the interpretation of the large solution features as of natural origin (but containing cultural material) is sound, based on the evidence from the evaluations [see REP1-045 & 046; REP1-042 & 043; REP1-049 & 050; REP1-051]. The recent publication/discovery does not change this conclusion.

To the extent that there are any unexpected finds, changes or developments in our understanding of features, or reinterpretations of features, the DAMS will respond to appropriately. As confirmed in Historic England’s response to the Secretary of State on 13th August 2020 [TR010025-001951]: *“In our opinion the provisions in the Detailed Archaeological Method Statement (DAMS) are sufficient to enable the Site Specific Written Schemes of Investigations (SSWSIs) to draw on*



	<p>and that a more thorough review and in particular far stronger acknowledgement of uncertainties is called for.</p>	<p><i>the implications of the SHLP research in finalising the detailing of the programme of archaeological mitigation should the Scheme be granted consent. Safeguards have been included within the DAMS and Outline Environmental Management Plan (OEMP) to facilitate the integration of the matters raised by the research into the approach taken to the Scheme.”</i></p>
<p>9.7</p>	<p><b>2c Wider generic implications raised for the A303 scheme</b></p> <p>The circumstances of the identification of the proposed Massive Pit Structure, the techniques applied in survey and field testing, the challenges to long-held interpretative assumptions and how previous investigations have reinforced rather than tested such assumptions raise numerous issues about the approach adopted in surveying and evaluating the archaeology of the proposed scheme [REP2-070 paras 40-43; REP2a-005 paras 24-27; 32-41, 50-59, 73-82 Appendix I; REP3-049 page 8, <i>Question CH.1.52 (Unforeseen finds)</i>]. This includes:</p> <ul style="list-style-type: none"> <li>- Limitations in investigative methods applied to identify and reliably interpret remains.</li> </ul>	<p>With regard to the general criticisms of the survey and evaluation strategy, the archaeological evaluation results, combining non-intrusive geophysical surveys, ploughzone artefact sampling and testing by trial trenching, form a robust baseline on which to make assessments of the impacts of the Scheme upon archaeological remains. This is further detailed in the Applicant’s overarching response to the Secretary of State in August 2020, which sets out the adequacy of the Archaeological Evaluation Strategy and the robustness of the HIA and ES [TR010025-001981, sections 2, 3 and 4].</p> <p>With regard to the alleged “limitations in investigative methods applied to identify and reliably interpret remains” and the alleged “lack of information on sampling rates”, as the Applicant has previously noted, “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</p>



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 (trial trenching in previous iterations of the Scheme since 1990) to achieve an overall sample of up to 5% by area outside of the WHS and between 5% and 10% by area within the WHS [noting that in the majority of areas within the WHS within the construction footprint for the Scheme the percentage sample was closer to the 10% mark], and taking into account the emerging results of academic research programmes undertaken over the last decade” [REP5-003, 34.1.16]. [see the written summaries of the Applicant’s oral submissions made at hearings on 5 and 6 June 2019, REP4-030, items 5 (i) and (ii)]. There are no limitations in the investigative methods used. The robustness of the evaluation strategy is demonstrated by the approval by Wiltshire Council and (for sites within the WHS) HMAG of the AESR, OWSI and individual SSWSIs; and by the monitoring of the implementation of the strategy on site and approval of the resulting evaluation reports]. The suitability and comprehensiveness of the evaluation programme were confirmed in evidence by the County Archaeologist, Ms Pomeroy Kellinger on behalf of Wiltshire Council [REP4- 030, items 5 (i) and (ii)]. It is clear therefore that there is no deficiency in the scope or execution of the evaluation strategy. The Applicant stands by its comprehensive and robust evaluations as indicated by Historic England’s recent assessment of the Applicant’s geophysical surveys in its submission dated 13th August [TR010025-001972]. This is further explained in the Applicant’s Overarching Response addressing the ‘new discovery’ [TR010025-001981, section 2] and at Point 9.1 above.



- Lack of information on sampling rates (especially trenching) and lack of any extrapolation of potential scale and extent of significant archaeological remains.

With regard to the “lack of any extrapolation of potential scale and extent of significant archaeological remains”, the Applicant does not agree with the extrapolations put forward by during examination, nor is there any need for them, because the evaluation carried out is thorough and robust, and the DAMS provides a flexible, scalable investigation strategy for the mitigation stage. Further detail follows.

The assessment and design of a scheme necessarily involves a staged, iterative process of identifying the known heritage constraints including the wider landscape context, determining the presence or absence of archaeological remains through targeted field evaluation, and systematically identifying and assessing the setting and significance of the heritage assets. The Applicant has undertaken comprehensive and robust archaeological field evaluation within the DCO boundary, carried out at an unprecedented level of detail commensurate with the status of the WHS. This has comprised up-to-date geophysical survey of the full red line boundary, ploughzone artefact sampling across all areas evaluated, and trial trenching, building on and augmenting the results of more than 25 years of previous investigations in connection with the A303, and taking into account the emerging results of academic research programmes undertaken over the last decade [REP5-003, 34.1.16]. This robust evaluation is key to enabling the prediction of and demonstrating the presence and research potential of archaeological remains.

The evaluation, the ES [APP-044] and HIA [APP-195] therefore consider areas with known and anticipated concentrations of archaeological remains, areas with archaeological potential, and the apparent 'spaces in between'.

At the Cultural Heritage hearings in June 2019, Professor Parker Pearson asserted an extrapolated number of burials and prehistoric artefacts potentially present; however, the Applicant, in its related post-hearing note, considers that these assertions are not soundly based [REP4-030, Agenda items 5 (i) & (ii)]. The Applicant has identified potential areas of lithic concentrations in the ploughzone in previous reporting [REP3-024]. The County Archaeologist has confirmed Wiltshire Council's view that the evaluation programme was comprehensive, and it is considered that enough information has come to light to give confidence going into the mitigation stage [REP4-030 item 5 (i), (ii)]. The Detailed Archaeological Mitigation Strategy (DAMS) [TR010025-001951] provides a comprehensive strategy for the mitigation of impacts on known and unknown archaeological remains. The DAMS [TR010025-001951] proposes a scalable investigation strategy, with proposed increases in the percentage of the sample, to refine the understanding of finds distributions in identified areas and to target resources in investigating them appropriately. This will be developed based on the results of statistical analysis, one of a suite of interpretative tools to develop a focused, research-driven strategy. This will assist in targeting the mitigation works in terms of the level of intervention required and the precise methodological approach to sampling to be utilised in a given area. The statistical analysis will continue reflexively throughout the process to identify additional



- Failure to integrate geophysical findings and trenching – eg the range and proportion of anomalies tested, density of geophysical anomalies, the range, scale and significance of excavated features in relation to whether they were detected by geophysics.
- Insufficient recognition of the archaeological potential of natural features (even when they are not misidentified anthropogenic features).

research questions based on spatial distribution. The statistical approach and the relevant research questions will be developed in consultation with Wiltshire Council and Historic England and, for sites within or affecting the WHS, HMAG. [TR010025-001951, paras. 6.3.15–6.3.18].

With regards to the systematic testing of geophysical anomalies, The Applicant has responded to this previously in its Overarching Response [TR010025-001981, section 2.4], which notes that “review of the evaluation results demonstrates that across the Scheme, 89% of the ‘features’ revealed in the evaluation trenches corresponded with geophysical anomalies and only 6% of the ‘features’ confirmed as archaeological were not seen in geophysics.”

With regards to the “Insufficient recognition of the archaeological potential of natural features “, contrary to the CBA’s assertion, the Applicant has recognised the potential of natural features to contain cultural material and has tested these in its archaeological trial trenches, investigating tree hollows and large natural solution hollows [REP1-039 to REP1-056; REP3-024]. As stated in para. 6.2.2 of the Overarching Response [TR010025-001981]: “As far as any additional or wider interpretation that might be entertained in light of the recently published discovery, the interpretation as natural features does not preclude anthropogenic modification and the mitigation strategy for the Scheme allows flexibility to investigate and



Generic implications also arise for how setting issues have been assessed. The implications of the *Internet Archaeology* paper reinforce our concerns about the approach adopted to issues of setting [REP2-070 paras 50-61; REP6-084 pp. 16-24; 59-61], especially the following

- The misleading artificiality of grouping monuments as if they were static groups through time.
- The failure to give due weight to physical and spatial interrelationships between monuments, including the setting of subsoil monuments and the contribution that once-visible buried monuments make to help appreciate and understand upstanding features.
- The failure to give proper weight – especially in relation to landscape-scale monuments and landscape-scale interrelationships – of their place within the still largely intact topography of the area as (apart from the celestial firmament) the only aspect of their surroundings that

interpret such features further, taking account of the Durrington Walls discovery.”

With regard to “how setting issues have been assessed”, the Applicant has previously responded at length in examination with regards to its Cultural Heritage Setting Assessment [APP-218] and comments by the CBA [see REP3-013 and REP8-013]. As stated in the HIA [APP-195, para. 5.3.20] “*The setting assessment considers factors set out in Good Practice Advice in Planning 3, The Setting of Heritage Assets (Historic England 2017), Guidelines for Landscape and Visual Impact Assessment (GLVIA3) (Landscape Institute / Institute of Environmental Management and Assessment 2013) and DMRB Volume 11 Section 3 Part 5, Landscape Effects.*” The HIA considers natural features with evidence for human use and the presence of cultural material dated to the Neolithic and Bronze Age; the interplay between fixed elements such as geology, topography, horizons and astronomical relationships; the development of the prehistoric landscape and the distribution of monuments; associative and contextual inter-relationships; and potential visual relationships and inter-visibility of these areas with each other. The Applicant would highlight that this setting assessment has been undertaken in line with Historic England guidance and that Historic England [TR010025-001972 notes in their recent submission that the HIA (which includes the Setting Assessment) is thorough and ‘that the assessments conducted under the Scheme were sufficiently rigorous to inform its determination’. See also the Applicant’s response at Points 9.2 and 9.5 above.



survives almost unchanged from prehistory.

- The failure to give due weight to interrelationships that straddle the WHS boundary – especially for example where such relationships between buried and upstanding monuments suggested in evidence as worthy of consideration, were dismissed on purely procedural grounds of not having previously been recognised rather than properly analysed.
  
- The failure to consider fully the cumulative harm that the DCO proposals would cause in exacerbating previous harm caused by the 1960s scheme and/or where particular sections or features of the scheme would

The Applicant refutes that it has not given due weight to interrelationships of Assets and Asset Groups that straddle the WHS boundary and would direct the Secretary of State to the main HIA [APP-195, section 5.10] where associated and transboundary groups are considered, including the Rollestone Barrows, Lesser Cursus Barrows and Pit Circle, The Diamond Group, and the Barrows on Winterbourne Stoke Down, as well as Larkhill Camp Long Barrow and Larkhill Causewayed Enclosure [APP-195, paras. 5.10.25 – 28: Asset Groups outside the Stonehenge part of the Stonehenge, Avebury and Associated Sites WHS]. The Applicant categorically refutes that it has “dismissed on purely procedural grounds” the relationship between buried and upstanding monuments as for example can be seen with regards to AG13 The Diamond Group where both ploughed out and upstanding monuments are considered and given Very High value [APP-195, pages 209–214]. The HIA clearly states, “This HIA considers impacts upon both sites located with the current WHS boundary, and physically related archaeological features that contribute to OUV located outside the current boundary.” [APP-195. Para. 5.10.5].

With regard to “cumulative harm”, the Applicant has already responded in detail at examination to these arguments by the CBA [see REP3-013 and REP8-013, paras. 2.1.7 and 2.1.28].



cause harm to multiple settings.

RECOMMENDATION: In considering the wider implications of issues contained within the Internet Archaeology paper, the Secretary of State should review how they reinforce, at a generic level many concerns about the reliability of baseline identification of archaeological remains and potential and also concerns about basic flaws in the approach to defining and assessing issues of setting, as highlighted in evidence by the CBA and others.

With regard to the CBA's recommendation, as set out at length by the Applicant throughout the Examination and since reconfirmed in relation the proposed 'discovery', there are no legitimate concerns to which the Secretary of State should attach any weight about reliability of baseline or potential, nor are there any flaws in the approach of the Applicant to setting. A comprehensive and robust evaluation programme has been undertaken [see Point 9.1 above] and known sub-surface archaeological features are addressed in the main ES [APP-044] and main HIA [APP-195]. The Heritage Impact Assessment (HIA) [APP-195, section 11] assesses the overall impact and significance of effect of the Scheme on the OUV of the WHS, including physical, visual, noise, setting and other impacts. The Applicant notes that the Attributes of OUV stress the importance of the siting of the sites and monuments in relation to the landscape, in relation to the skies and astronomy, in relationship to each other, and their siting, physical remains and setting that together form a landscape without parallel. The HIA considers and assesses the impact of the Scheme on Attributes of the OUV of the WHS, including the setting and relationships between the monuments within the visual envelope of the WHS. ES Chapter 6, Cultural Heritage [APP-044], reports impacts on all designated and non-designated heritage assets, including the Stonehenge, Avebury and Associated Sites WHS. These are informed by ES Appendix 6.9 - Cultural Heritage Setting Assessment [APP-218] and draw on data from other technical



		<p>disciplines. Historic England also broadly concurred with the assessment in the HIA in its application of the ICOMOS 2011 guidelines [TR010025-001972], the overall assessment conclusions and noted that the HIA was thorough and state in paragraph 4.4: “<i>We consider that the assessments conducted under the Scheme were sufficiently rigorous to inform its determination and development of an appropriate and proportionate archaeological mitigation strategy. The recently published research does not change our view of those assessments.</i>”</p> <p>The ES [TR010025-001979] and HIA Addenda [TR010025-001980] assess the impacts and effects of the Scheme on the Attributes of OUV, Integrity and Authenticity of the World Heritage Site (WHS) in the context of the ‘new discovery’ and conclude that the findings from the original ES [APP-044] and HIA [APP-195] would be unchanged.</p>
9.8	<p><b>ISSUE 3: IMPLICATIONS FOR THE APPLICANT’S ENVIRONMENTAL STATEMENT, INCLUDING THE HERITAGE IMPACT ASSESSMENT, AND THE PROPOSED DETAILED ARCHAEOLOGICAL MITIGATION STRATEGY.”</b></p> <p><b><i>ES Baseline conditions</i></b></p> <p>As noted above, the southern limits of the proposed Massive Pit Structure as now understood, together with the southern post alignment that appears to be associated lies c. 200m north of the DCO redline boundary, but well within the 500m corridor examined</p>	<p>The Applicant notes that the Avenue and Vespasian’s Camp, both noted by the CBA as ‘landscape-scale monuments’, are adjacent to the DCO boundary and both have been assessed thoroughly and comprehensively in the setting assessment [APP-218] and the HIA [APP-195]. The proposed Durrington Henge discovery has been assessed at face value as part of baseline by the Applicant in its ES and HIA Addenda [TR010025-001979 and TR010025-001980] submitted on 13th August.</p> <p>With regard to “features now interpreted as forming part of the Massive Pit Structure circuit”, “Four were previously known and were assessed as part of the Main ES [APP-044] and the Main HIA [APP-195] (4A – is a Scheduled Monument, NHLE 1009138; 6A – is a Scheduled Monument, NHLE 1009137; 9A –</p>



for the detailed Baseline Gazetteer. As a major landscape-scale monument it is much closer than the Cursus and other key monuments included in the HIA assessment of setting effects. As noted below, three or four of the features now interpreted as forming part of the Massive Pit Structure circuit are already included in the baseline study, but the others are not. At the most basic level this needs correcting. Also absent is the parallel post and/or pit alignment. Arguably the most significant implication of this discovery by SHLP – like their finds of other previously unrecognised hengiform and other monuments – is the sensitivity of response achieved. We noted in evidence that in the surveys for the A303 scheme, none of the significant burials and small pots identified by trenching had been located by geophysical surveys [REP2a-005 paras 36-39, 76], but the SHLP post/pit alignment might indicate detection features of similar scale (details are not given). A trial of geophysical sampling rates for the scheme showed that enhanced sampling produced better defined results for large features but it does not appear that a comparison has been made between the resolution of the SHLP surveys and those for A303 [REP1-041 Appendix A pp. 79-80]. This adds further uncertainty about whether the most effective and sensitive methods for large scale

is a Scheduled Monument, NHLE 1009145; and 7A was known from aerial photographic evidence in the National Mapping Programme and on the Wilshire and Swindon Historic Environment Record (WSHER) No. MWI72763” [TR010025-001979, paras. 1.1.11; 4.2.4]. These and the remaining constituent elements of the ‘new discovery’ are taken at face value and are further detailed and assessed in the Applicant’s Addenda to the ES and the HIA [TR010025-001979, section 5.3 and TR010025-001980, paras. 2.5.14–15; 3.3.8–11], which found that there will be no new Likely Significant Effects and that the overall impact on the WHS and its OUV remains unchanged.

With regard to small features, such as postholes and pit alignments, the Applicant has responded in its Overarching Response [TR010025-001981, para. 2.4.2c] “*No postholes were identified as geophysical anomalies. This is not uncommon with magnetometer surveys, which are typically less effective at identifying small features than large pits and linear features. This was specifically catered for in the overall strategy as the magnetometer surveys were supported by trial trenching. This trial trenching provided the opportunity to assess the presence of such smaller features as well as to verify the interpretations of the geophysical anomalies more generally and allow an assessment of the numbers and nature of archaeological features likely to be present.*” As indicated in the Applicant’s Overarching Response in August 2020, “a detailed analysis of the geophysical survey data [REP1-041] and trial trenching results [REP1-042 & 043; REP1-045 & 046; REP1-047 & 048] [...] demonstrates that across the Scheme, 89% of the ‘features’ revealed in the evaluation trenches corresponded with geophysical anomalies and only 6% of the ‘features’ confirmed as archaeological were not seen in geophysics. It is not correct,



survey were used. Apart from the more systematic analytical comparison of geophysical survey and trenching / test pitting results already called for, a direct comparison with the resolution SHLP data would help to define the overall limitations and levels of uncertainty.

therefore, that the geophysical survey suggested very low numbers of features; rather, the figures demonstrate a good correlation between the geophysics results and the trial trenching results across the Scheme” [TR010025-001981, paras. 2.4.2 2.4.4].

The complete dataset from the SHLP surveys in 2010–2014 or more recently has not been released into the public domain, for example through deposition of the data or interpretive reports with the Wiltshire and Swindon Historic Environment Record, as might reasonably be expected over such a timescale. As such, it has not been possible for the Applicant to review the underlying data that has supported the 'new discovery' prior to its publication in June 2020. The SHLP project did provide to Highways England, in 2018, data and an interpretative report relating to a restricted study corridor (which included the land contained within the DCO boundary and a limited buffer (50m)), on a commercial basis and subject to an agreement not to distribute further: this report was fully considered by the Applicant in their preparation of the Environmental Statement. With regard to the suggestion that a direct comparison with the resolution of A303 surveys and SHLP data is required, the Applicant notes that The Archaeological Evaluation Strategy Report (AESR) and its accompanying and Overarching Written Scheme of Investigation (OWSI) were approved by Wiltshire Council and HMAG and guided the development by Highways England of Site Specific Written Schemes of Investigation (SSWSIs): these SSWSIs were approved, and their implementation on site monitored, by Wiltshire Council and, for sites within the WHS, HMAG. HMAG approved the scope, coverage, area and techniques to be employed in the Applicant's Archaeological Evaluation in the WHS – including



The features identified by Gaffney et al.'s Figure 9 are only the larger examples of geophysical anomalies that might have been misinterpreted. There remain much larger numbers of smaller and or less regular features, including some natural hollows or areas of thicker soil that may be disguising archaeological features. One of the most striking features of the Durrington excavation, the Larkhill East trenches and Gaffney et al's boreholes

the resolution and techniques required for the Applicant's geophysical surveys. The robustness of the evaluation strategy is demonstrated by the approval by Wiltshire Council and (for sites within the WHS) HMAG of the AESR, OWSI and individual Site Specific Written Scheme(s) of Investigation (SSWSIs); and by the monitoring of the implementation of the strategy on site and approval of the resulting evaluation reports. The suitability and comprehensiveness of the evaluation programme were confirmed in evidence by the County Archaeologist, Ms Pomeroy Kellinger on behalf of Wiltshire Council [REP4-030, items 5 (i) and (ii)]. It is clear therefore that there is no deficiency in the scope or execution of the evaluation strategy, nor is there any need to carry out a comparison of resolutions of survey. The Applicant stands by its comprehensive and robust evaluations as indicated by Historic England's recent assessment of the Applicant's geophysical surveys in its submission dated 13<sup>th</sup> August [TR010025-001972]. The DAMS provides ample scope to address discoveries during the mitigation programme and to take account of emerging discoveries and theories within and in the vicinity of the WHS.

The Applicant has responded to the CBA's arguments regarding smaller features, less regular features and natural hollows containing cultural material earlier in this Point 9.8 and at Points 9.3, 9.4 and 9.6 above.

The Applicant stands by its assessments of Scheme impacts and resultant effects as set out in the ES [APP-044] and the HIA [APP-195] as well as those presented in the Addenda to the ES and HIA submitted to the Secretary of State on 13th August 2020 [TR010025-001979 and TR010025-001980]. To the extent the features in question are shown to have "greater significance



– together with the example trenched in the eastern portal approach area – is the common occurrence of cultural material sometimes in significant quantities and at significant depths in these features.

We have highlighted in evidence [REP2a-005 paras 24; AS-075; REP8-036 para 5.4] – especially in the context of tree-throw holes, but also other natural hollows undulations and areas of colluvial accumulation – such features and deposits, even if natural features in origin, have significant potential as undisturbed areas below the level of ploughzone disturbance in which evidence of human activity – both intentional and coincidental – has been trapped. Gaffney et al make it clear that the assumptions and interpretations that have been applied to the features they have reviewed in identifying the Massive Pit Structure means that much more work is needed to understand them better and to clarify how far some of them may be modified natural features or entirely artificial. Either way they have much greater potential than the assessment has allowed for in the baseline study for the scheme.

The bibliography of the Baseline Gazetteer lists 26 geophysical surveys. The Baseline Report states:

than first thought”, the DAMS will respond to it with a strategy to be consulted on and ultimately approved by key statutory stakeholders, developed via its reflexive and iterative approach to archaeological mitigation as set out in the DAMS [TR0100256-001951].

The Applicant notes that the references to the quoted unique identification numbers (UIDs) from the baseline report [APP-211] and gazetteer of archaeological assets [APP-213] cover large

3.5.53 *A common feature of the Early and Middle Neolithic, pits also continued to be dug across the Stonehenge landscape into the 3rd and 2nd millennium. As noted previously, geophysical surveys have detected large numbers of pit-like responses (e.g. UIDs 1008, 2038, 2123, 2143, 2144, 2145, 2178, 2180, 3031, 3106, 4078, 4079, 4080, 4140), many of which have yet to be tested by intrusive investigation. Although many of these may relate to geological or other, naturally derived features, some could relate to Late Neolithic and Early or Middle Bronze Age pits.*

Almost all these particular entries in the Gazetteer refer to “Numerous possible undated pits detected by geophysical survey” mostly without any indication of number, size, shape, distribution or density, though sometimes with other comments related to trenching. Some of these contain features that Gaffney et al indicate on their fig 9. Some but not all refer to the need for further investigation to clarify their nature.

As we have previously noted, this leaves much uncertainty. There has also been only limited attempts to quantify the character of anomalies considered to be natural hollows, sinkholes or tree-throw hollows,

areas of the landscape where the historic previous geophysical surveys were undertaken by Historic England or for earlier iterations of the Scheme, not just within the DCO boundary or the actual construction footprint. As noted at Point 9.9 below, the Applicant’s acknowledgement of assumptions and limitations of particularly survey techniques are expressly set out in section 6.4 Assessment assumptions and limitations in the ES cultural heritage chapter [APP-044] and Assessment assumptions and limitations and Variations from HIA Scoping in the HIA [APP-195, paras 5.6.17–21].

With regards to quantifications of the character of geophysical anomalies within the DCO redline, this has shown a good correspondence between geophysical results and trial trenching. It is therefore incorrect to say that there is much uncertainty remaining. Please see the Applicant’s Overarching Response [TR010025-001981, para. 2.4.2] which states that ‘A detailed analysis of the geophysical survey data [REP1-041] and trial



although these can include significant archaeological materials or disguise its presence, and the sample investigated is unquantified – but as shown on the plans of trenches relative to features recorded by geophysics, an extremely limited sample of the total present.

trenching results [REP1-042 & 043; REP1-045 & 046; REP1-047 & 048] indicates that:

a. Of 121 'features' (of all forms and sizes, both those identified as archaeological and those suggested to be natural) recorded during trial trenching across the Scheme, 108 corresponded to geophysical anomalies (89.26%) identified from the geophysical surveys; of these 108, 67 were confirmed to be archaeological features (62.04%);

b. Of the 121 'features', 75 were identified as archaeological (61.98%). Only eight archaeological features were not seen as geophysical anomalies in the geophysical surveys (6.66% of the 121 'features'); of these eight, two were ditches, three were pits and three were postholes.'

With regard to the "extremely limited sample" of geophysical anomalies tested by trial trench evaluation, the Archaeological Evaluation Strategy Report for the Scheme included detailed principles, one of which states 'Only undertake the minimum appropriate intrusive field work where it is necessary to inform research questions and the design process. Fieldwork should have the minimum impact possible', as the work was to be undertaken within the WHS. The detailed principles and Archaeological Evaluation Strategy Report were agreed with Wiltshire Council and HMAG and with inputs from the Scientific Committee before investigation work commenced on site. The detailed principles within the Archaeological Evaluation Strategy also state: '*Only undertake extensive intrusive works in areas where it is probable that there will be a direct impact through*

*development, or where there is a need to consider management issues.* This supports the International Committee for the Management of Archaeological Heritage's 1990 Charter for the Protection and Management of the Archaeological Heritage [[https://www.icomos.org/images/DOCUMENTS/Charters/arch\\_e.pdf](https://www.icomos.org/images/DOCUMENTS/Charters/arch_e.pdf)] which states that "It must be an overriding principle that the gathering of information about the archaeological heritage should not destroy any more archaeological evidence than is necessary for the protectional [sic] or scientific objectives of the investigation. Non-destructive techniques, aerial and ground survey, and sampling should therefore be encouraged wherever possible, in preference to total excavation." As stated in the ES Addendum, the majority of the features identified in figure 9 in the Gaffney et al paper 2020 will not be physically impacted by the Scheme, as they either lie outside the DCO boundary or will be preserved in situ within the DCO boundary, under the terms of the DAMS [TR0100256-001951]. As previously noted in ISH 2 regarding Cultural Heritage [REP4-030], Wiltshire's County Archaeologist stated that evaluation fieldwork "was informed by the World Heritage Convention. The principles included that intrusive work would only be undertaken where necessary to understand the impact of the Scheme on key assets. The approach was carefully balanced to ensure damage was minimised or avoided" [REP4-030, item 6 (i)]. In this respect, the approach taken for the Scheme is consistent with good practice. It would therefore not be appropriate to undertake excessive evaluation, intrusive evaluation beyond the Scheme boundary, and in areas not physically impacted by the Scheme.



The interpretative assumptions that Gaffney et al have challenged in identifying the arcs of their proposed Massive Pit Structure around Durrington Walls as massive pits rather than ploughed- out barrows, dew ponds etc are strikingly similar to those prevalent not only in the Baseline Gazetteer, but also in the geophysical surveys and their interpretation working through to the evaluation trenching, which tested some, but seemingly very few of these features.

With regard to “interpretative assumptions”, the Applicant acknowledges that the interpretation of the WHS landscape and its wider context is the subject of constantly evolving debate. The HIA clearly highlights the limitations of interpreting ploughed-down barrows from aerial photographs, stating in the case of the Countess Farm scheduled monuments, “a further eight possible barrows or ring ditches have been noted on aerial photographs, although their identification is uncertain [...] In part, this may be due to the lack of surface expression of several of the monuments, which are known largely from assessments of aerial photographs, antiquarian investigations and occasional modern interventions. As a result, the exact number and morphologies of certain monuments is unclear” [APP-195, page 394]. Reporting notes assumptions and limitations, including stating “The correctness and completeness of the NHLE [Historic England’s National Heritage List for England] and HER [Wiltshire County Council Historic Environment Record] databases is assumed. Where there is a variance between scheduled areas and or other features plotted from historic aerial photographs or geophysics, the most recently acquired geophysical survey data is assumed to be the accurate data source.” [APP-195, para. 5.6.17b]. The reflexive and iterative nature of the DAMS provides ample scope to address discoveries during the mitigation programme, test hypotheses, and take account of emerging discoveries, theories and understanding of the landscape. This is further detailed in the Applicant’s response at Point 9.3 above. In any event, the Addenda proceed on the precautionary basis that Gaffney et al.’s challenges are correct and still find no change in effects and regarding other similar features, the Applicant remains confident in their characterisation of these: As noted in its overarching response addressing the ‘new discovery’ submitted to the



Another of the problems of the baseline study that we highlighted [REP2a-005 paras 32-39] was the unduly limited extent of trenching. The sampling rate (ie the percentage by area of development areas exposed by trenches) was (most unusually) not quoted in the reports. Our own calculation [REP1-041 Appendix A pp. 79-80] based on areas of different zones covered by the trenches and their number and dimensions, suggested that the coverage of trenching in areas affected by the scheme was well below what is usually considered necessary for predominantly prehistoric remains. The discoveries discussed by Gaffney et al provide a telling comparison: those development areas were subject to

Secretary of State on 13th August, “The Applicant considers that the interpretation of these features as of natural origin (but containing cultural material) is sound, based on the evidence from the evaluations. As far as any additional or wider interpretation that might be entertained in light of the recently published discovery, the interpretation as natural features does not preclude anthropogenic modification and the mitigation strategy for the Scheme allows flexibility to investigate and interpret such features further, taking account of the Durrington Walls discovery.” [TR010025-001981, para. 6.2.2].

With regards to the sampling rate, the percentage of trenching undertaken within the footprint of the Scheme (within the impacted area for construction), the Applicant has responded to this on several occasions previously. The Applicant points to its Comments on Written Representations [REP3-013, para. 21.4.7] and our responses to the CBA [TR010025-001126, para. 13.1.7] and to the Consortium of Archaeologists [REP7-021, para. 40.1.2], which show that the CBA is mistaken. As the Applicant has previously noted, “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 [trial trenching in previous iterations of the Scheme since 1990] to achieve an overall



5% coverage<sup>12</sup> which is at the lower end of the norm for prehistoric sites, but much higher than the overall coverage for the A303 scheme. Even so, the trial trenching at Durrington did not encounter either the 20m diameter pits or the late Neolithic post alignments subsequently found.<sup>13</sup> At Larkhill East, two pit features clearly identified by geophysics and targeted by trenching in the eastern part of the site were recorded as “*geological features containing archaeological deposits*” (though one of them was not observed in a subsequent pipeline watching brief); of the other two, in the much more disturbed western area less clearly defined by geophysics, one may have been recorded as Coombe deposits and the other was missed by trenches.<sup>14</sup>

These examples illustrate the challenges to be faced in the interpretation of geophysical surveys and subsequent deployment and interpretation of test trenching, whether in areas subject to much recent disturbance or largely undisturbed land. They strongly reinforce concerns we have already presented in evidence to the Examination (noted above) about insufficient levels of sampling, flaws in the methodology reporting and interpretation of the baseline studies, insufficient acknowledgement of

sample of up to 5% by area outside of the WHS and between 5% and 10% by area within the WHS (noting that in the majority of areas within the WHS within the construction footprint for the Scheme the percentage sample was closer to the 10% mark), and taking into account the emerging results of academic research programmes undertaken over the last decade..” [REP5-003, 34.1.16].

The archaeological evaluations at Durrington and Larkhill East were not undertaken as part of the Scheme: they were undertaken prior to development by the Ministry of Defence. See the Applicant’s written summary of oral submissions made at ISH2 (submitted at Deadline 4) made in relation to agenda items 5(i) and (ii) in relation to perceived limitations of the assessment undertaken and perceived failures of the archaeological investigation methods used. 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. 21.4.67–74) and full appreciation and understanding of the importance of the WHS and its OUV (para. 21.4.5). There is no basis for the concerns narrated by the CBA.



major uncertainties and limitations and the need for a much more precautionary multi-disciplinary approach to mitigation fieldwork, geared to find the unusual and special, not just reinforce pre-existing assumptions and generalised characterisations.

But the implications of the *Internet Archaeology* paper relative to SHLP work also impinge on the Baseline Archaeological Report dated 2018. This states [APP-211 para 2.3] that sources include:

*2.3.1 f) Results from major research projects within the Stonehenge landscape ( subject to a availability) including but not limited to: the fieldwalking of the 1980s Stonehenge Environs Project; the geophysical survey of the Stonehenge Hidden Landscape Project; the Stonehenge Riverside Project; and recent Historic England research including the Stonehenge World Heritage Site Landscape Project, and the Stonehenge Southern WHS Survey Project. [added e mphasis]*

It is unclear exactly what access to “*the geophysical survey of the Stonehenge Hidden Landscape Project*” was obtained in terms of the raw geophysical survey results. The baseline report itself makes specific references to three discoveries by the Stonehenge Hidden Landscape Project for which the source is cited as Gaffney, C. et al., 2012<sup>15</sup>:

The SHLP project did in 2018 provide to Highways England data and an interpretative report relating to a restricted study corridor, on a commercial basis and subject to an agreement not to distribute further: this report was fully considered by the Applicant in their preparation of the Environmental Statement and Archaeological Baseline Report [APP-211] and Gazetteer of Archaeological Assets [APP-212].

In those documents, ‘natural’ deposits were not dismissed as the CBA alleges; indeed, natural features frequently form ‘traps’ for cultural and palaeoenvironmental material, whether deliberate deposits, discarded waste, or material accidentally incorporated through erosion, ploughing and soil formation processes, and are therefore of archaeological interest. Natural features can form traps regardless of whether they may have been considered significant to past human populations.

The fact that a feature is not of anthropogenic origin does not necessarily mean it is not of archaeological interest; indeed, due to this potential interest, the DAMS “provides for development of site specific research questions with input from specialists through SSWSIs; for natural features containing cultural material to be fully (100%) excavated; and for iterative development of strategies on site to respond to the nature and significance of the features encountered” [TR010025-001981, para. 6.2.4].



- At paras 3.4.20 and 3.5.19, the discovery of two very large pits near the western and eastern terminals of the Greater Cursus and their possible astronomical significance.
- At para 3.5.35, the discovery of large anomalies under the bank of the Durrington Walls henge, initially thought to be stones or stone holes, subsequently found to be pits.
- At para 3.5.48, two concentric oval arrangements of features beneath the barrow known as Amesbury 50 (NHLE 1012399) south of the western end of the Greater Cursus.

But apart from this, the archaeological Baseline Gazetteer [APP-212] refers to c.39 monuments, sites or features recorded by the Hidden Landscapes Project – the majority also recorded in other sources. {SEE FIGURE ON PAGE 17 OF THE SUBMISSION).

Mostly these entries are referenced “SHLP 2018” (some with identifying reference numbers) but unhelpfully, this citation is not given in the bibliography. It is not clear if this is another publication, an inventory of identified features, or results observed directly from the survey data.

Neither were pit-like features dismissed as ploughed out barrows as the CBA alleges. They were subject to considered and robust assessment by the Applicant, which has been evidenced in the application documents and submissions to examination. The main ES [APP-044] and main HIA [APP-195, paras. 5.10.22–28] submitted with the application considered known Neolithic pits published prior to September 2018 as part of the assessment. These include those published in Gaffney et al. 2018 Durrington Walls and the Stonehenge Hidden Landscape Project 2010–2016. Archaeological Prospection. 25(3), pages 255–269 [<https://doi.org/10.1002/arp.1707>], which were referred to in Paul Garwood’s presentation on behalf of the Consortium of Archaeologists & Blick Mead Project Team during oral submissions put at Cultural Heritage hearings at the hearing on 21 August 2019 [TR010025-001064]. The Applicant responded to these submissions in oral evidence given at the hearing [see written summary, REP8-016, item 5.1 (ii)]. Within the evaluation area, the Applicant’s geophysical survey identified all the anomalies highlighted by Mr Garwood. With the exception of one anomaly (see ES Addendum: anomaly 001), which lies within a later prehistoric enclosure [APP-212: UID 2039], which will not be impacted by the Scheme and was therefore deliberately excluded from the evaluation, the anomalies discussed by Mr Garwood in his presentation were all subsequently tested by trial trenching and/or boreholes: the assessments made by Highways England are based on the results of these evaluations [REP1-041; REP1-042 & 043; REP1-045 & 046; REP1-049 & 050; REP1-052 & 053].



When these entries are compared with where their locations are shown on the detailed map of features listed in the Gazetteer, and when overlaid on the *Internet Archaeology* distribution of pit-like features over 5m across, some appear to be correlated, but at the scales involved it is not easy to tell for sure which numbered entries apply. [See Figure 4]

Items 4005 (or possibly 4077.1 or 4077.2), 4008 and 4011 appear to be the features 4A, 5A and 6A in Gaffney et al's 'Massive Pit Structure' but SHLP is not cited as a source for these, and the other features forming the majority of the S arc within the 500m study area are not identified.

As Gaffney et al state in relation to the features shown in their fig 9 which are not part of the arcs round Durrington Walls, "*the character and significance of the remaining features, and their distribution, awaits detailed investigation.*" While it is possible that the Gazetteer entries are correct, for several of these features lying within the SHLP study area the project's results are not cited as a source. It is also evident that none of the features Gaffney et al have identified as worth reconsidering as possible pits or shafts have been

With regard to features making up the 'new discovery', as stated above, the data provided by the SHLP project only covered the area within the Scheme boundary and a limited 50m buffer. The 'southern arc' of anomalies identified in the recent 2020 Gaffney et al. paper lies 150m north of the data buffer provided by the SHLP project to the Applicant, therefore it was not considered in the ES [APP-044] and HIA [APP-195]. As explained in the Applicant's Overarching Response addressing the 'new discovery' [TR010025-001981], the Applicant has provided EIA and HIA Addenda [TR010025-001979 and TR010025-001980] with regards to the 'new discovery' to ensure that it has been robustly assessed in the context of the WHS. The Applicant has assessed the significance of the 'new discovery' taking the published evidence at face value, and thereby assuming that they contribute to conveying attributes of OUV and add to our understanding of large-scale prehistoric landscape organisation. These Addenda conclude that no new Likely Significant Effects have been identified or changes to the overall conclusions regarding the impact of the Scheme on the 'new discovery', stated interrelationships, contribution to expressing Attributes of OUV and the WHS as a whole following the 'new discovery'



considered in that light, though some interpreted as definite or probable archaeology have been discounted as possibly natural deposits. UID 4011 is especially striking as one of SHLP's pit-features in the southern arc that was scheduled as a ploughed out round barrow and cited in the Gazetteer as potentially non- archaeological. Almost the examples within or close to the WHS are cited as ploughed out barrows, in some instances with a possible ditch that could alternatively be the halo effect reported by Gaffney et al in relation to the pit features in the southern arc that were identified (and scheduled) as ploughed-out barrows and cited as such in the Gazetteer.

**RECOMMENDATION** The Secretary of State should require the ES and HIA baseline studies to be reviewed and overhauled, not only in the light of the Gaffney et al paper but also its implications in reinforcing legitimate concerns about both generic and specific shortcomings that we and others made to the Examination. This must include presenting the actual geophysical survey results for ALL the areas affected by the scheme that were not made available to the Examining Authority, both within the WHS (including the tunnel section) and missing areas outside it (such as Countess East).

There is no need for the ES or HIA baseline studies to be overhauled. The Applicant has provided Addenda to the ES [TR010025-001979] and the HIA [TR010025-001980] that consider the 'new discoveries' published in the 2020 Gaffney et al. Paper. Historic England has indicated in their submission of the 13th August [TR010025-001972] that the HIA is 'thorough' and that the assessment that supports the DCO application is 'rigorous'. It is therefore clear that the Applicant's archaeological evaluation methodology and the assessments contained in the HIA and ES which drew on the results of that methodology, are robust and fit for purpose.

The geophysical survey reports, excluding the SHLP report which the Applicant is contractually obliged not to release into the public domain by the SHLP project, have been issued to the



		<p>examination at Deadline 1 [REP1-041, REP1-051, REP1-54 and REP1-055], and two further reports, a palaeoenvironmental assessment, and a review of ploughzone lithics and tree hollow distributions, were submitted at Deadline 3 [REP3-023 &amp; REP3-024]. For surveys that were undertaken at Stage 2, are available on the Scientific Committee website <a href="http://a303scientificcommittee.org.uk/archaeological-reports">[http://a303scientificcommittee.org.uk/archaeological-reports]</a> or, in the case of Historic England’s Geophysical Survey report, this is available from the Archaeological Data Service <a href="https://archaeologydataservice.ac.uk/archiveDS/archiveDownload?t=arch-1870-1/dissemination/pdf/english4-252285_1.pdf">[https://archaeologydataservice.ac.uk/archiveDS/archiveDownload?t=arch-1870-1/dissemination/pdf/english4-252285_1.pdf]</a>. These reports are therefore already in the public domain.</p>
9.9	<p><b>ES assessment of harm</b></p> <p>It is well-established in reviews of the EIA process that if baseline studies present incomplete data, have not sufficiently reviewed pre-existing information or rely on flawed interpretations, it is inevitable that any assessment of effects will also be flawed in relation to any impacts related to those inadequacies, either because they are missed entirely or misunderstood in terms of the nature of the impact and significance of effects, or because of wider implications that highlight more generic flaws in approach. A key part of this process – arguably more in relation to archaeology than any other EIA topic needs to be clear acknowledgement and explanation of limitations and uncertainties, both inherent in the nature of archaeological remains and through the limitations of investigative surveys.</p> <p>In this case, with respect to the proposed Massive Pit Structure, it would not be physically harmed so the</p>	<p>As explained at Point 9.1 above, there is no question of the Applicant having presented incomplete data in its baseline studies for the historic environment, or “not sufficiently reviewed pre-existing information, or relied on flawed interpretations”. There is therefore no question of the assessment of effects being flawed. The Archaeological Evaluation Strategy, ES [APP-044], HIA [APP-195] and Addenda [TR010025-001980; TR010025-001979] are complete and robust, as further verified by stakeholder comment from Wiltshire Council and Historic England [TR010025-001972, paras. 2.5.2 and 2.5.3; TR010025-001972, paras. 2.5.2 and 2.5.3].</p> <p>Regarding the requirement for “clear acknowledgement and explanation of limitations and uncertainties”, the Applicant’s acknowledgement of assumptions and limitations are expressly set out in section 6.4 Assessment assumptions and limitations in the ES cultural heritage chapter [APP-044] and Assessment assumptions and limitations and Variations from HIA Scoping in the HIA [APP-195, paras 5.6.17–21]. Design principles,</p>



apparent range of interpretations of its constituent pit-features does not arise ; but in respect of its setting it does make a difference – as already explained above. But perhaps the biggest implications are the generic issues:

- Whether some of the features identified as ploughed-out barrows or potentially existing under barrows could be large pits or sinkholes – including over the areas within the WHS in the approaches to or over the tunnel where the geophysical plots have not been presented – and if so what possible impacts could arise?
- How other features comparable to those making up the proposed Massive Pit Structure would be affected by disturbance, burial or harm including the far more numerous smaller examples not referred to be Gaffney et al?
- How the significance of the settings of other landscape scale monuments, included buried monuments and landscape-scale interrelationships between monuments and groups has systematically been under-

assumptions and limitations on design information are set out in ES Chapter 2 [APP-040].

Regarding the 'new discovery' circuit of anomalies, as presented in the 2020 SHLP Paper, these have been assessed in the Addenda to the ES [TR010025-001979] and the HIA [TR010025-001980].

The Applicant stands by its comprehensive archaeological evaluation surveys, particularly in respect of the approaches to the tunnel portals. The results of these are detailed in the reports submitted at Deadline 1 [REP1-041 and REP1-045 to REP1-048] and Deadline 3 [REP3-023 and REP3-024]. No large pit-like features (over 5m+ in diameter) have been identified in the footprints of the approaches to the tunnel or over the line of the tunnel itself either in the archaeological evaluations undertaken by the Applicant, or in the SHLP report for the area over the line of the tunnel shared with the Applicant. With regard to smaller features, see the Applicant's response at Point 9.3 above; "trial trenching provided the opportunity to assess the presence of [...] smaller features as well as to verify the interpretations of the geophysical anomalies more generally and allow an assessment of the numbers and nature of archaeological features likely to be present" [TR010025-001981, para. 2.4.2c]. There was "a good correlation between the geophysics results and the trial trenching results across the Scheme" [TR010025-001981, para. 2.4.4].

Impacts on large pit-like features have been assessed in the main ES [APP-044, for example UIDs 2038, 2065 and 2143 (note the latter is a typo and should be read as UID 2144)] and



estimated?

- How previously unidentified effects that may not in themselves be substantial, may nonetheless contribute cumulatively to already identified impacts – especially if those have already been badly underestimated (as in the case of the eastern portal approach cutting)?

RECOMMENDATION: The Secretary of State should require that once the baseline studies have been reviewed and overhauled, the same should be done for the ES and HIA assessments of effects, not only in the light of any revisions to the baseline, but also with regard to all the other criticisms of generic and specific shortcomings that we and others made to the Examination that are reinforced by the wider implications of the Internet Archaeology paper. This needs to include a far more honest and transparent reporting of uncertainties and limitations.

the summary of non-significant effects [APP-217, for example UIDs 1008, 2178 and 2180] noting that these spreads of pit-like geophysical survey anomalies cover large areas well beyond the DCO boundary or the footprint for the construction of the Scheme.

The Applicant refutes that the setting of heritage assets and asset groups, whether buried or visible, and their landscape interrelationships has been underestimated in the Cultural Heritage Setting Assessment [APP-218] or in the HIA [APP-195]. The assessment documents have been endorsed by Historic England as ‘thorough’ and ‘rigorous’ in their response submitted on the 13<sup>th</sup> August [TR010025-001972].

As set out above, the assessment of the effects of the Scheme, including in-combination and cumulative effects, in the ES, HIA and Addenda is thorough and robust. There is therefore no issue and no implication. See Point 9.5 above regarding cumulative aspects.

There is no justification for any “review or overhaul” of baseline studies. The Applicant’s Archaeological Evaluation Strategy, ES and HIA have been shown to be extensive, thorough and robust. There are no uncertainties or limitations requiring reporting beyond those already covered in the documents. The Applicant has assessed the significance of the ‘new discovery’ based on the published evidence. The Applicant submitted addenda to the ES [TR010025-001979] and HIA [TR010025-001980] to the Secretary of State on the 13th August which considered the Scheme’s impact upon the discovery and its stated interrelationships. These show that the Likely Significant Effects, as reported in the main ES [APP-044], and the conclusions of the main HIA [APP-195] do not change following the publication of the discovery.



9.10

### ***Mitigation and DAMS***

Perhaps the most salutary consideration raised by the *Internet Archaeology* paper (and its sources) is the evidence of how the interpretations and assumptions made in the geophysics, trenching and full excavation of the northern arc at Larkhill East and Durrington sites did not fully investigate those features because they were assumed to be sinkholes. That may or may not be the case for those particular features, but they are now no longer available for re-investigation and clarification. The approach adopted there was much the same approach as that taken for the A303 scheme in the baseline studies and fieldwork and the DAMS. It acts as a warning that the DAMS has been prepared on the basis of the same assumptions with too little regard for uncertainty and unexpected discoveries which have long been a feature of the Stonehenge area.

The Applicant refers the Secretary of State to the response by Wiltshire Council on 13th August 2020 [TR010025-001968] with regards to the interpretation of the northern arc of anomalies as natural sinkholes, the validity of such an interpretation and the validity and accordance with good practice of the mitigation strategy implemented. The Secretary of State is also reminded that the authors of the *Internet Archaeology* paper (Gaffney et al. 2020) also agree with the interpretation of the northern arc of anomalies as a line of natural sinkholes following a dry valley. The archive of digital and paper records and data, photographs and artefacts from the archaeological evaluations and excavations, as is standard practice, will be available for re-interrogation, re-analysis and reinterpretation once the archive is deposited with a Museum. Therefore, if the CBA continue to doubt the interpretation of the northern arc of features as of natural origin, contrary to the archaeologist who excavated the features, the County Archaeologist who visited the site, monitored the features being excavated and signed off the area as being completed satisfactorily, and following the considered, thoughtful interpretation of the academics who put forward the 2020 SHLP Paper, who also consider the features to be of natural origin, then the archive will be available to the CBA to interrogate for themselves.

As explained above, no such assumptions were made – the conclusions were entirely justified. The CBA's comments here about the DAMS are mistaken in that and all other regards. The DAMS [TR010025-001951] has been prepared with a reflexive approach allowing it to adapt to new discoveries and pose new questions with regards to the archaeological remains that are uncovered in an iterative manner. It also has a procedure for unexpected finds [TR010025-001951; 6.3.2; 6.31.19-21]. The



Applicant has previously responded regarding unexpected discoveries in its response to the Examining Authority's Written Question CH.1.52 [REP2-025]; Comments on Written Representations [REP3-013, paras. 12.3.143; 21.4.74; 21.4.99-102; 22.1.25]; the Applicant's written summary of its oral submissions at ISH 2 with respect to agenda item 7 (ii) [REP4-030; Comments on any further information requested by the Examining Authority and received at Deadline 4 [REP5-003, para. 34.1.39], the Applicant's response to the Examining Authority's Written Question CH.2.1 [REP6-022], Comments on any further information requested by the Examining Authority and received to Deadline 5 and 6 [REP7-021, 13.2.13] and the Applicant's Written summary of oral submissions put at Cultural heritage, landscape and visual effects and design hearing on 21 August 2019 [REP8-016, 5.1 (iii); 5.2 (ii)]. The Secretary of State should also note the Applicant's closing statement [TR010025-001775; section 5.3] which states that the DAMS "provides a comprehensive programme of archaeological mitigation [...] which has been developed as a result of very extensive consultation and input from statutory bodies, members of HMAG and the Scientific Committee. Both the detail of the proposals and the extent of the consultation and involvement from other parties are unprecedented, reflecting the significance of the WHS."

We made extensive criticisms of the DAMS in our evidence to the Examination at several stages [REP2-070; REP2a-005; REP6-084 pp 5-13; REP8-037 ],

The Applicant has responded to the CBA's comments with regards to sampling strategies within the DAMS in previous submissions to the examination [see responses REP8-013,



criticising its complacency in being far too prescriptive in limiting sampling strategy to a characterisation approach, not one based on ensuring recovery of the very rare, unusual or unexpected remains that make most contribution to OUV.

One of the areas we focussed on was the potential value of tree-throw holes and other seemingly 'natural' features and deposits as repositories of undisturbed material. Although the final version of the DAMS has been altered to allow a somewhat more responsive approach to sampling, we expressed our concern that the changes are not sufficient – or subject to sufficiently independent scrutiny [CBA letter to Secretary of State May 27<sup>th</sup> unpublished – See Appendix A].

In that letter we said:

*We have consistently urged a precautionary approach. Dealing with uncertainty and being prepared for the discovery of totally unforeseen new insights (which are often more important than the research questions that can be foreseen) is at the heart of archaeological endeavour. While procedural arrangements for better engagement of specialist research advice are welcome, flexibility to respond in the light of what is found is essential. In our view it*

paras. 2.1.3, 2.1.4 and 2.1.8 and REP9-022, paras. 18.2.1, 18.2.2, 18.2.3 and 18.2.5].

As explained in the Applicant's Overarching Response addressing the 'new discovery' [TR010025-001981], the Applicant has put forward a comprehensive archaeological mitigation strategy within the DAMS [TR010025-001951] that allows a flexible and iterative response as the work proceeds and including the development of theories and research questions following emerging discoveries [TR010025-001951, para. 6.1.24; 6.3.7–8; sections 6.3–6.7] and a strategy for unexpected finds [TR010025-001951, paras. 6.1.19–21; 6.5.8]. Wiltshire Council and Historic England consider that the DAMS and its Archaeological Research Agenda provide an appropriate



*remains the case – as we explained in detail to the Examination – that:*

- *The whole procedure proposed is based on evaluation work that was not scientifically analysed to provide an objective assessment of its limitations or to make any quantitative predictions or estimates of what exists within the areas affected.*

- *The risk and scale of important evidence*

basis for development of site-specific research questions and SSWSIs. Historic England’s closing submission [AS-111] confirms, “We believe that the dDCO, OEMP and DAMS set out a process to ensure that heritage advice and considerations can play an appropriate and important role in the construction, operation and maintenance of the Scheme [...] we consider sufficient safeguards have been built in for the detailed design stage”. As confirmed in Historic England’s response to the Secretary of State on 13th August, with regards to the DAMS [TR010025-001951]:

“In our opinion the provisions in the Detailed Archaeological Method Statement (DAMS) are sufficient to enable the Site Specific Written Schemes of Investigations (SSWSIs) to draw on the implications of the SHLP research in finalising the detailing of the programme of archaeological mitigation should the Scheme be granted consent. Safeguards have been included within the DAMS and Outline Environmental Management Plan (OEMP) to facilitate the integration of the matters raised by the research into the approach taken to the Scheme.”

The Applicant further details the fitness for purpose of the DAMS in their Overarching Response addressing the ‘new discovery’ [TR010025-001981, section 5].

With regard to the “risk and scale of important evidence not being recovered due to insufficient sampling” we refer the Secretary of State to the Applicant’s Overarching Response



*not being recovered due to insufficient sampling has not been objectively considered relative to policy tests.*

- *The approach to sampling is still not sufficiently precautionary, or sufficiently fully integrated to ensure full recovery of sparse, rare or unique evidence that would contribute to current and future understanding of the OUV of the WHS and its surroundings.*

addressing the ‘new discoveries [TR010025-001981, section 2] which not only sets out the unprecedented scale of the archaeological evaluations undertaken to support the DCO Application, but also sets out clearly both the high quality of the work and a detailed analysis and comparison of the geophysical data and trial trenching data that shows that “across the Scheme, 89% of the ‘features’ revealed in the evaluation trenches corresponded with geophysical anomalies and only 6% of the ‘features’ confirmed as archaeological were not seen in geophysics... the figures demonstrate a good correlation between the geophysics results and the trial trenching results across the Scheme.” With regards to the policy test, the Secretary of State can be assured that the DAMS [TR010025-001951] ensures that appropriate procedures are in place for the identification and treatment of unexpected finds, should they be uncovered, in advance of construction in compliance with NNNPS para. 5.142. All other policy compliance is shown in the NPS compliance tracker [AS-142].

The Applicant and Heritage Consultees therefore agree that the DAMS is fit-for-purpose and reflexive. The work will be undertaken with due regard to the fact that sparse, rare or unique evidence could contribute to current and future understanding of the OUV of the WHS and its surroundings.

The Applicant has responded previously at examination to the CBA’s comments on the soil handling strategy and to the deliverability of its preservation in situ strategy [REP8-013,



- *The conflict of soil handling standards versus archaeology remains unresolved, still with no attempt to demonstrate scientifically what is deliverable, and with no clear default position as to options for preservation or recording any archaeology that might be damaged (which itself is not yet well understood).*
- *There is no requirement to follow rather than just consider independent expert advice, contrary to the heritage-led objective of the scheme.*

In terms of subsoil features, the Secretary of State's questions of 4<sup>th</sup> May specifically concerned tree-throw holes, but in our original evidence we included other

paras. 2.1.3, 2.1.4 and 2.1.8 and REP9-022, paras. 18.2.1, 18.2.3 and 18.2.5] as set out in the OEMP and the DAMS.

With regards to independent expert advice, the Scientific Committee will be involved in workshops to focus research questions for the Site Specific Written Schemes of Investigation (SSWSI) in each archaeological mitigation area [see TR010025-001951, paras. 6.3.16 and 6.3.51]. Their independent advice, therefore, will be incorporated into each SSWSI for the delivery of specific archaeological mitigation works. The obligation will be to consult heritage stakeholders and ultimately follow what Wiltshire Council approves, entirely in keeping with the heritage-led objective of the Scheme.

With regards to the quotation from para. 4.5.3 of the DAMS, the CBA has taken this out of context, and clearly the lack of 'upstanding surface expression' relates to other evidence and important classes of material such as 'scatters of cultural material in the ploughzone' which are stated later in the sentence.



deposits as well. In the light of the *Internet Archaeology* paper, and especially the incomplete investigation of the pit-like features at Larkhill East and Durrington sites, these concerns are even more strongly reinforced. [Appendix A]

In sections 3 and 4 of the DAMS there are numerous references to ‘natural hollows’, ‘solution hollows’, ‘natural depressions’, ‘dolines’, ‘sinkholes’ etc. (note for example para 3.3.65) and there are likewise numerous mentions of such features in the Appendix D in the descriptions of ‘Archaeological Mitigation Action Areas’ (in some cases including relevant research aims). Their potential to contribute to research, though not as an overarching theme relevant to people’s engagement with the natural environment [REP9-018 pp. 37-39; and paras 4.3.8, 4.4.2, 4.4.3, 4.4.16, 4.5.3]. But to suggest that such features ‘*would have had little or no upstanding surface expression*’ (para 4.5.3) is patently not the case where cultural material in such features is found metres below ground surface. This understates the possible significance of such features, whether natural or anthropogenic in origin, or hybrid.

But when it comes to proposals for excavation, DAMS makes no clear provision for the investigation such

The DAMS [TR010025-001951] incorporates strategies for the excavation and recording of discrete natural features that contain cultural material [para. 6.3.42], buried ground surfaces [para. 6.3.43], tree hollows [paras. 6.3.49–51] and a strategy for geoarchaeological investigation of natural deposits and sequences [para. 6.7]. The features that are therefore of concern to the CBA are all covered in the strategies set out in the DAMS.



features in Section 6 setting out the overall proposals for excavation (for example in paragraph 6.3.31 refers only to lithic scatters in 'surface hollows' and there is no mechanism for investigating features identified by the range of terms used in the descriptions and research issues as they are not included with tree-throw holes (paras 6.3.49 to 6.3.51). Likewise, not mentioned as targets for investigation in Appendix D setting out the 'Archaeological Mitigation Action Areas'. The provisions of the DAMS for geoarchaeology (section 6.7) also makes no reference to such features, the only specified targets for investigation being colluvial deposits.

Nor is there any reference to the potential for shafts to be encountered over or in the tunnel, which in the absence of actual geophysical plots and confusions about interpreting geophysical anomalies revealed by Gaffney et al, adds to uncertainty and risk. While it would be impossible to mitigate such features if they were encountered by the tunnel boring machine, the as-yet-to- be-defined ground monitoring regime ought to allow for such an eventuality.

Regarding the potential for encountering shafts and the CBA's comments criticising the quality of the archaeological evaluation surveys, the Applicant has responded to this point already at Point 9.9 above. With regard to mitigation of shafts containing archaeological assets affected by the tunnel, the Applicant explained in detail at ISH2 [REP4-030; item 7(iii) under the heading 'DAMS paragraph 4.2.6'] how ground movement during tunnelling would be managed noting that a suite of measures could be employed if required and confirmed that the choice of techniques will be developed by the contractor, informed by site specific investigation, and that the monitoring would be managed by the Ground Movement Monitoring Strategy. At ISH8 [REP8-016; item 4.3 (iv)] the Applicant further explained that "As part of Ground Movement Monitoring Strategy (MW-CH8 (in the OEMP [TR010025-001949])), and in accordance with MW-NOI5, the contractor shall develop contingencies using a suite of toolbox items from further investigation, assessment and monitoring during construction to identify measures to ensure the protection of heritage assets. MW-NOI5 requires any actions to control or mitigate impacts to be agreed between the



main works contractor, the operator of the equipment and The Authority as appropriate, in consultation with the members of HMAG". The ground movement monitoring regime therefore does allow for the eventuality to which the CBA refers.

To the extent that shafts are directly impacted by construction, as noted in the Applicant's overarching response submitted in August, "The DAMS [TR10025-001951] already provides for the investigation of these and other such features, where impacted by construction. [DAMS] Paragraph 6.3.42 states [...], "Within the WHS, pits, post-holes and other isolated features (including natural features that have been shown to contain archaeological remains) will be completely (100%) excavated (unless otherwise agreed in consultation with Wiltshire Council, Historic England and, for sites within the WHS, HMAG). Outside the WHS, these types of feature will normally be completely (100%) excavated (unless otherwise agreed in consultation with Wiltshire Council, Historic England and, for sites within the WHS, HMAG as part of the iterative process) (see paragraph 6.1.24 and section 8.1); half-sectioning of features may be adopted, in consultation with Wiltshire Council, subject to the significance of the remains and the research questions identified in the SSWSIs. The significance of the remains and their potential to contribute to the OUV of the WHS will be considered in consultation with Wiltshire Council and Historic England (and, for sites within the WHS, HMAG) in determining the sample size to be excavated. This DAMS provision ensures that solution hollows or other natural features encountered during the mitigation programme and shown to contain archaeological remains will be subject to archaeological investigation." [TR010025-001981, para. 5.4.3–4].



The approach set out in DAMS reflects the desire to minimise any uncertainty and deal only in established interpretations, built around types of feature rather than where evidence might be found to address research questions. This has left very little allowance for explicit investigation of the complexities of people using and creating features with such fluid interpretations as Gaffney et al have reviewed and revealed.

If approved the DAMS would become a legally binding document governing the response to the harm that the scheme would cause to the archaeological heritage and how it contributes to the OUV of the WHS, so its technical details and terminology matter. The implications of the *Internet Archaeology* paper have shone a clearer light on these unresolved omissions and shortcomings of the DAMS – even in its

The DAMS [TR010025-001951, see paras. 4.2.1 and 6.1.12] is reflexive and iterative and therefore allows new theories and interpretations to influence research questions that are put forward in SSWSIs and also to vary the method and sampling whilst the archaeological excavations progress on site. The Workshops with the Scientific Committee will further allow opportunities for new research questions to be posed and for the SSWSIs to take new research and ideas into account in the approaches to archaeological mitigation.

The Applicant does not consider, for all the reasons set out above, that the DAMS contains any omissions or shortcomings. The Applicant understands this view to be shared by key stakeholders. Wiltshire Council and Historic England consider that the DAMS and its ARA provide an appropriate basis for development of site-specific research questions and SSWSIs.

- Wiltshire Council's response to the Secretary of State's Consultation of 16 July 2020 states: "The Council sees no need for a wholesale review of the key scheme documents which are comprehensive and compliant" and "The DAMS and forthcoming SSWSIs provide a mechanism for fully assessing any further such features which may be discovered during the mitigation phase on the road line and portals, in the unlikely event that they



supposedly 'final' current form.

have not been picked up during the evaluation.”

[TR010025-001968, sections 2.4 & 2.5].

- Historic England’s closing submission [AS-111] confirms, “We believe that the dDCO, OEMP and DAMS set out a process to ensure that heritage advice and considerations can play an appropriate and important role in the construction, operation and maintenance of the Scheme [...] we consider sufficient safeguards have been built in for the detailed design stage.”
- As confirmed in Historic England’s response to the Secretary of State on 13th August, with regards to the DAMS [TR010025-001951], “In our opinion the provisions in the Detailed Archaeological Method Statement (DAMS) are sufficient to enable the Site Specific Written Schemes of Investigations (SSWSIs) to draw on the implications of the SHLP research in finalising the detailing of the programme of archaeological mitigation should the Scheme be granted consent. Safeguards have been included within the DAMS and Outline Environmental Management Plan (OEMP) to facilitate the integration of the matters raised by the research into the approach taken to the Scheme.”

In addition, the National Trust, in their response [TR010025-001975] state: “This reflexive approach, coupled with the promotion of high quality research has the ability to ensure the archaeological mitigation undertaken as part of the Development responds appropriately to any new information, and discoveries in order to appropriately hone both the creation of SSWSIs, and



With regard to mitigation and the issues of setting that arise as outlined above, it is the basic design concept and alignment of the scheme with two major cuttings approaching the tunnel portals in combination with the current (1960s) scheme (much the largest intrusion into the natural topography) that is the main source of harm to the OUV criterion of the relationships between monuments and the landscape. This cannot be mitigated through the DAMS and after efforts to reduce the visibility of the scheme a significant adverse residual that cannot be addressed

to allow for further modification in light of additional information that comes to light during the course of fieldwork” [TR010025-001975, para. 6.1.7].

The Applicant further details the fitness for purpose of the DAMS in their Overarching Response addressing the ‘new discovery’ [TR010025-001981, section 5].

The Scheme design has optimised the positions of the tunnel portals within the landscape at the head of dry valleys, and the road (and traffic on it) has been designed to be hidden within deep retained cuttings that minimise land-take, views, reduces noise and improves the tranquillity of the WHS. The further addition of canopies at the western and eastern portals extend the tunnel from 3km to almost 3.3km and aid landscape integration. Physical and visual connectivity between the key Asset Groups that contribute to the OUV of the WHS is maintained by Green Bridge No. 4 and the use of a retained cutting in the western approaches with chalk grassland mitigation allows visual connectivity to be maintained between monument groups and integration with the surrounding landscape. The surface dual carriageway, constructed in the 1960s) from where it begins west of Stonehenge Road and Vespasian’s Camp, will also be removed and replaced with chalk grassland. The Scheme seeks to avoid and minimise adverse impacts on the Attributes that convey the Outstanding Universal Value (OUV) of the WHS, its Integrity and Authenticity, wherever possible, and is assessed to have a Slight Beneficial



except by adopting a radically different and less harmful solution.

RECOMMENDATION: The Secretary of State should require that the DAMS should be further reviewed and overhauled in the light of the Gaffney et al paper – especially in relation to how the surveys, evaluations and excavations in advance of development at Larkhill East and Durrington did not fully investigate or record features that with hindsight may well be seen as having been misinterpreted, and not sufficiently investigated. The Secretary of State should recognise that the assumptions that led to those features not being more fully investigated still permeates the approach to mitigation and specific actions set out in DAMS. It needs to be thoroughly reconsidered to apply a far more precautionary approach less geared to recovering a representative sample of evidence reinforcing existing assumptions, and more focussed on going beyond this to ensure full recovery of sparse, rare or unique evidence that contributes to current and future

effect on the OUV of the WHS as a whole and to sustain the OUV of the WHS.

As set out above, the Applicant and Heritage Consultees agree that the DAMS is fit-for-purpose and reflexive, employing innovative approaches to address a question-based research strategy that places the significance of the archaeological resource at the centre of the decision-making both at design and implementation phase. It applies the highest practicable standards both to known archaeological remains and for unexpected finds. The work will be undertaken with due regard to the fact that sparse, rare or unique evidence could contribute to current and future understanding of the OUV of the WHS and its surroundings. Many of the implications of the proposed discovery and concerns about assumptions posited by the CBA are mistaken, for the reasons set out above. To the extent there are any legitimate implications of the proposed ‘discovery’, taking it at face value, the DAMS response to them. No review or overhaul is necessary.



	<p>understanding of the OUV of the WHS and its surroundings.</p>	
<p>9.11</p>	<p><b><i>Residual effects and risks and policy context</i></b></p> <p>We summarised our overall view on the balance of residual effects and the wide-ranging uncertainties and risks to the archaeology of the area, and have explained these in relation to EIA requirements, NSPNN policy and WHS Management Policies and UK International commitments [REP2-075]. The implications of the SHLP discovery and reinterpretation of pre- existing evidence are substantial and wide ranging – though in many ways for this scheme for the generic issues of baseline studies, assessment and mitigate as the headline discovery itself. These implications highlight and illustrate very many of our concerns. We have explained how the harmful effects have been badly underestimated or in some cases missed, and the tangible benefits – essentially for visitors’ enjoyment have been overestimated relative to other concerns that they have demonstrably expressed in online reviews. A key consideration in all this is the weight that needs to be given to the risks of significant unidentified harm to major assets that cannot be avoided.</p>	<p>The Applicant has responded at length during examination as to the correct approach to undertaking the HIA (see for example its response to Written Question G.1.1 [REP2-021]; its response to agenda item 3vi, 4i, 4ii and 4iii in the oral submission report from ISH2 [REP4-030] and appendix A of that oral submission report; and its detailed response to ICOMOS-UK [REP7-021, para. 31.1.2]. These submissions detail the correct application of the World Heritage Convention as part of the UK’s legislative and policy framework, and discuss ICOMOS Guidance, which identifies that the process of assessing the impact of the Scheme on the WHS requires consideration of harm against benefits.</p> <p>In brief, in accordance with ICOMOS HIA guidance, both positive and negative impacts are considered against attributes of OUV integrity and authenticity and a judgment arrived at on the overall significance of effect.</p> <p>The HIA has been carried out accurately in compliance with the Guidance on Heritage Impact Assessments for Cultural World Heritage Properties adopted by the International Council on Monuments and Sites (ICOMOS 2011) and with a full appreciation and understanding of the importance of the WHS and its OUV including the Integrity, Authenticity and the Attributes that convey OUV. The Scheme avoids known funerary and ceremonial monuments and has been designed to minimise land-take and the loss of archaeological remains within the WHS. The loss of archaeological remains has been taken into account in arriving at the assessment of harm to the attributes of</p>



We made extensive criticisms of the Baseline studies and DAMS, as outlined above, stressing how the approach to sampling is not geared to ensuring recovery of the very rare, unusual or unexpected that make most contribution to OUV. We highlighted the policy context [REF paras D.3 ] that NSPNN para 5.124 which refers to *'the primary source of evidence about the substance and evolution of places, and of the people and cultures that made them'* and the very explicit requirement on the Secretary of State in para 5.129 to

*..take into account the particular nature of the significance of the heritage asset[s] and the value that they hold for this and future generations. This understanding should be used to avoid or minimise conflict between their conservation and any aspect of the proposal.*

In commenting on these and other key NSPNN provisions in the context of Articles 4 and 5 of the World Heritage convention and the WHS Management Plan policies create a very high threshold for being sure that important remains would not be lost or rendered inaccessible – especially in

OUV [REP7-021, para. 6.3.2; REP8-016, para. 3.3]. The HIA was carried out in accordance with the methodology set out in the HIA Scoping Report, which was endorsed by the Heritage Monitoring and Advisory Group and the UNESCO/ICOMOS Mission in 2018 [APP-195, section 3.3, paras. 3.3.4–3.3.6 and REP1-008, section 5.6]. The thoroughness of the HIA is acknowledged by Historic England [TR010025-001972]. The Applicant therefore does not agree that harmful effects have been badly underestimated or missed and that tangible benefits have been overestimated. The Scheme has been carefully and sensitively designed with due regard to the WHS and the Attributes that convey the Outstanding Universal Value (OUV) of the WHS, its Integrity and Authenticity and in order to limit impacts to the historic environment. Negative and positive changes of the Scheme are both extensively and thoroughly considered in the main ES [APP-044] and the main HIA [APP-195]. The Scheme is assessed to have a Slight Beneficial effect on the OUV of the WHS as a whole and to sustain the OUV of the WHS.



respect of anything contributing to the OUV of the WHS, [REP2-075].

Seeking to put paragraph 5.129 and the flexibility of the WHS Management Plan to adapt to new understanding of what contributes to the components of OUV in the context of how the value that heritage assets hold for this and future generations evolves, we observed that

*Within the professional career of any single generation of living archaeologists the approach to different kinds of archaeological deposits and remains and artefacts and the techniques of scientific research that can be applied, and above all the theories, hypotheses and interpretations that have been applied to them – and hence how they are valued – has always changed dramatically and will continue to do so. It is a trend that has accelerated with the expansion of archaeology as a field of study and the increasingly rapid and varied development of new and refined scientific techniques.*

And noted that

*The ideas and interpretations conveyed now are far richer, more complex and insightful than was the case only half a generation ago. To suppose that present day archaeologists, scientists or others know how their ideas will stand up to future scrutiny, or what future*



*generations will put most value in, is pure hubris. In the context of Stonehenge this policy provision requires the utmost caution and humility, a fully precautionary approach should be adopted so that so that the limitations of present day values and ideas – advanced as they may seem now – should NOT be allowed to result in the loss of physical remains that with new techniques, ideas and values may be far more important in future than they seem at present.*

Without commenting on how research questions and interpretations change as well as technical advances, Highways England's response [REP3-013 para 21.4.4] was to assert that we were putting forward

*.....a speculative argument that future technology may discover more information in this area of the WHS. This is particularly the case having regard to the technology which is already available now, the comprehensiveness of the assessment undertaken and the mitigation measures in place in the Detailed Archaeological Mitigation Strategy (DAMS).*

The discoveries reported by Gaffney et al, and especially the circumstances underlying them at Larkhill East and Durrington, represent a quintessential

The Applicant acknowledges that understanding of the uses and meanings of the WHS landscape is the subject of a constantly evolving debate. The speculative argument that future technology may discover more information about the WHS is addressed in the Applicant's Comments on Written Representations [REP3-013, para. 21.4.4]. The future research potential, from the archaeological excavations undertaken in advance of the Scheme, is addressed in the post-hearing note included in the Applicant's written summary of oral submissions made at Issue Specific Hearing 2 [REP4-030, item 6]. The comprehensive Detailed Archaeological Mitigation Strategy (DAMS) [TR010025-001951], developed in consultation with members of the Heritage Monitoring and Advisory Group (HMAG), and with input from the Scientific Committee, seeks to capture current research questions and is reflexive and iterative in order to respond to developing theories, interpretations and technologies as the design of the archaeological mitigation



example of what can happen when both questions and techniques advance. The *Internet Archaeology* paper and its wide-ranging implications equally vividly show up the 'pure hubris' demonstrated by Highways England's complacent response. It is a position of over-confident certainty and denial of limitations and shortcomings that has bedevilled the approach adopted by the Applicant. The circumstances of the discovery also demonstrate clearly the practical difference between research-led and development-led archaeology in what remains available for future investigation.

Because of the likely significance of their proposed Massive Pit Structure, it is an especially striking example of the importance of appreciating the significance of the precautionary approach that underpins policy, both in NPSNN and the WHS Management Plan and under UK commitments under the WHC.

**RECOMMENDATION:** The Secretary of State should recognise the far-reaching implications of the identification of a major new monument as proposed by Gaffney et al, and in particular the salutary lessons it poses concerning

works is progressed, and to address new discoveries during the mitigation programme. Heritage consultees have also confirmed in their submissions that the DAMS is fit-for-purpose and that the dDCO, Outline Environmental Management Plan (OEMP) and DAMS ensure that heritage advice can play an appropriate and important role in relation to the Scheme detailed design [see Historic England's closing statement to the Examination - AS111, para. 1.7].

The Applicant is not complacent about new discoveries or new interpretations and this is precisely why the approach inbuilt into the DAMS [TR010025-001951] is reflexive so that new ideas and approaches can be integrated, and new research questions posed before the archaeological mitigation works are implemented, during their execution and when the results are being assessed, analysed and interpreted.

The Applicant states that the quality and report record of professional archaeological contractors who have a long history and experience within Salisbury Plain and the WHS stands for itself and shows their professional commitment to high quality work to high professional standards, as well as timely publication.

The Applicant would point the Secretary of State to the submissions of Wiltshire Council [TR010025-001968] and the National Trust [TR010025-001949] as to the evidence base for the 'new discovery' and the significance of the discovery. Even



	<p>how development can destroy, or render inaccessible for re- investigation, archaeological remains of great importance whose significance may only emerge when new questions are asked or new techniques applied. Given the policy context and outstanding shortcomings of the DAMS he should give serious weight to concerns not only that the overall heritage balance has been misjudged, but that the approach to mitigation through DAMS remains flawed and insufficient to be a properly precautionary approach.</p>	<p>assuming that the conclusions of the paper proposing the discovery are accurate, the ES and HIA Addenda show that the effects of the Scheme are unchanged. The Applicant points to the reflexive approach in-built within the DAMS [TR010025-001951] and that Heritage Consultees consider the DAMS to be fit-for-purpose, employing a suitably precautionary approach, contrary to comments by the CBA. The Applicant therefore refutes that the overall heritage balance has been misjudged or that the approach to mitigation through the DAMS remains flawed. The correct heritage balance remains as set out in the Applicant's Case for the Scheme [APP-294] and its Closing Statement [TR010025-001775].</p>
9.12	<p><b>ISSUE 4 OTHER MATTERS RAISED IN THE .... REPRESENTATIONS RELATING TO THE ARCHAEOLOGICAL FIND AT THE WORLD HERITAGE SITE...</b></p> <p>The representations made by other parties<sup>17</sup> also put these discoveries within wider considerations affecting the general policy balance – which in the context of the only marginal benefit that the Applicant claims for the World Heritage Site, is a key consideration. We have already given evidence on how this has been misjudged with regard to the balance of harm over benefit, the interpretation of policy, the inadequacies of the special contingency valuation to justify the exceptional cost of the scheme, and inadequate consideration of alternatives [REP2-070; REP3-050]. The implications of the discoveries and challenges to past assumptions that</p>	<p><i>Impact of the findings of the 2020 SHLP paper:</i></p> <p>The Applicant responded in detail to the CBA's submissions on the matter of policy balance during examination [please insert references to the response documents].</p> <p>With regard to the implications of the proposed 'discovery', the Applicant refers to conclusions presented in its overarching response addressing the 'new discovery' submitted to the Secretary of State on 13th August [TR010025-001981]. In relation to the balance of harm over benefit, the HIA Addendum demonstrates that the effect of the Scheme on the WHS as a whole, the Attributes of OUV, its Integrity and Authenticity, as assessed in the Main HIA submitted with the application, would be unchanged. The ES Addendum has not identified any new likely significant effects beyond those already identified in the Main ES submitted with the Application. In relation to the interpretation of policy, the conclusions of the overarching response also confirm that the Scheme maintains conformity with the NPS in light of the findings of the 2020 SHLP paper</p>



the *Internet Archaeology* paper highlights, as explained above, reinforce our wider conclusions.

One of the wider procedural issues raised in the representations made alongside the issues arising from the new discoveries is the concern that the scheme has been developed in the context of a Road Investment Strategy and Route Strategy that have not been subject to Strategic Environmental Assessment. We have already given detailed evidence on this [REP2-070; REP2-078; REP3-050] which we had discussed with a senior retired planning QC and we note that in respect of RIS2 this is the subject of a Judicial Review case brought by the Transport Action Network now fast -tracked to heard in November.<sup>18</sup> Their outline statement of case makes many of the same basic points that we have raised. It is now for the Court to determine this, but as already explained in our evidence, if the challenge to RIS2 were to be upheld, it would have serious implications with regard to the Secretary of State's duties for determining this application under the 2008 Planning Act, as well as the 2015 Infrastructure Act.

**RECOMMENDATION:** The Secretary of State should note the representations that put these discoveries into the context of much wider considerations affecting the general

[TR010025-001981, section 6.3]. Paragraph 6.3.3 states: "The conclusions presented in the HIA Addendum [TR010025-001980] and ES Addendum [TR0100-001979] show that the Scheme maintains conformity with the NPS. As such, it has not been considered necessary to update the National Policy Statement for National Networks Compliance Tracker [AS-142]. This is on the basis that the HIA Addendum concludes that the discovery does not change the assessment of Scheme impacts on the WHS as a whole set out in the Main HIA and the ES Addendum has not identified any new likely significant effects beyond those already identified in the Main ES."

Matters relating to value for money and consideration of alternatives have been addressed previously in the Applicant's response to the CBA's written representations [REP2-070 and REP3-050], in the Applicant's Deadline 3 Submission – 8.18 – Comments on Written Representation [REP3-013] and Deadline 4 Submission – 8.31 – Comments on any further information required by the ExA and received to Deadline 3 [REP4-036] documents.

*Requirement for SEA:*

The Applicant refers to its comments on the CBA's written representation [REP3-013, paragraph 21.1.16] and the



policy balance, including the absence of any SEA of the RIS2 Route Strategy development programmes. He should consider the implications of the discoveries reported by Gaffney et al and the circumstances of their recognition and their far-reaching wider implications about the substantial archaeological risks and uncertainties inherent in the likely effects of the scheme. These need to be set within the overall balance of harm over benefit to the WHS, the exceptional cost of the scheme, whether other better less costly solutions may be available and how this relates to wider considerations of how best to enhance, not harm protected landscapes.

comments on any further information required by the ExA and received to Deadline 3 document [REP4-036, paragraph 13.1.21]. As stated in the latter 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.”



## 10 Wiltshire Archaeological and Natural History Society

	Matter Raised	Highways England's Response
10.1	<p>The Highways England proposal will damage archaeological remains, have a significant physical impact and visually intrude into the open landscape of the Stonehenge part of the World Heritage Site.</p>	<p>The Applicant does not agree with Wiltshire Archaeological and Natural History Society's comments. The Scheme has been designed carefully and sensitively to avoid archaeological remains wherever possible and to hide the Scheme within the landscape, including in key views from sensitive heritage assets and receptors.</p> <p>Heritage has been a key consideration during route selection and consultation. Cultural heritage is one of the objectives for the Scheme defined in the Department for Transport's Client Scheme Requirements: to help conserve and enhance the World Heritage Site (WHS) and to make it easier to reach and explore [APP-294, VI]. The preferred route was carefully chosen to minimise effects on archaeology, and a comprehensive programme of archaeological evaluation surveys has informed the Scheme design to limit direct physical impacts as far as practicable, including limiting impacts on archaeological remains that contribute to the Outstanding Universal Value (OUV) of the WHS.</p> <p>The Heritage Impact Assessment (HIA) [APP-195] assesses the impact of the proposed scheme on the attributes of the OUV, integrity and authenticity of the WHS. It also considers the alignment of the Scheme with the vision, aims and policies of the 2015 WHS Management Plan and the criteria for the site's inscription as a WHS. The scheme is assessed to have a Slight Beneficial effect on the OUV of the WHS as a whole. This takes into account that of the seven attributes of OUV for the WHS (four of which encompass elements of landscape (Attributes 3, 4, 5 and</p>



6), whilst the Scheme will have a slight adverse effect on two of those attributes (Attributes 2 and 3), it will have a beneficial effect on the remaining five being a slight beneficial effect on 3 of the attributes (Attributes 5, 6 and 7), a large beneficial effect on one (Attribute 4), and a very large beneficial effect on one (Attribute 1)). This conclusion also takes into account that the scheme will have a slight beneficial effect on the authenticity and integrity of the WHS. Overall, the OUV of the WHS would be sustained.

Examples of how the design has been developed to limit direct impacts on archaeology include the choice of a northern bypass of Winterbourne Stoke, the reduced footprint and land-take for Rollestone Corner, and the design and placement of the western and eastern tunnel portals and approaches in areas that have been shown to have limited archaeological remains within their footprint. Further information can be found in the Assessment of Alternatives, Environmental Statement (ES) Chapter 3 [APP-041] and in ES Chapter 6, Cultural Heritage [APP-044], section 6.8, table 6.9.

The Scheme will improve the visitor experience by transforming the WHS landscape, reconnecting the two halves of the WHS, which are currently severed by the surface road. Connectivity into and through the WHS will be improved through the placement of the road in bored tunnel and the provision of new and enhanced public rights of way across the landscape.

Cultural Heritage Design Commitments are set out in the Outline Environmental Management Plan (OEMP) [TR010025-001949, table 3.2b]. These include specific design parameters related to road geometry and scale, land-take, lighting, signage, boundary fencing and gates to ensure that the Scheme is visually recessive and sympathetically integrated within the WHS.



Design Principles are also set out in the OEMP[TR010025-001949, chapter 4 and table 4]. The Design Vision Overall Aims stated in OEMP para. 4.2.6 include:

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

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

**c) High quality and imaginative design.** *The engineering and architectural design of the Scheme should create a clear design rationale sympathetic to its context using a co-ordinated palette of*



*materials and finishes, with imaginative design features, e.g. green bridges and green infrastructure.*

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

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

The Applicant has placed the significance of the archaeological resource at the centre of decision-making both at design and implementation phase. The design of the Scheme has been developed to mitigate impact upon archaeological remains: the impact of the Scheme upon archaeological resources has been minimised or avoided where possible. Highways England has put forward a comprehensive archaeological mitigation strategy within



		<p>the Detailed Archaeological Mitigation Strategy (DAMS), which notes “<i>priority will be given to the preservation of archaeological remains within the DCO boundary. Where avoidance of remains is not possible, measures will include protection of remains within working areas, preservation of archaeological remains that are required to be covered over temporarily (e.g. in compound areas or beneath temporary roads), and preservation of archaeological remains that will be permanently covered beneath shallow fill. In respect of archaeological remains within the footprint of the Scheme, a comprehensive programme of archaeological mitigation fieldwork and recording will be implemented. This will include archaeological excavations, recording, reporting, publication, and dissemination to local communities, the wider general public and academics. The archaeological mitigation programme will address the Archaeological Research Agenda and will be undertaken to the highest practicable standards, employing innovative data collection approaches and techniques. The question-led approach will aim to contribute to the corpus of archaeological research and understanding to mitigate the loss of archaeological remains.</i>” [TR010025-001951, paras. 5.1.1–5.1.2].</p> <p>The archaeological investigation and documentation proposed in the DAMS is directed at addressing research questions and will only investigate areas impacted by the scheme; other areas will be protected and preserved in situ. These excavations will be undertaken in accordance with agreed international and national professional standards.</p>
10.2	<p>We note that while the Neolithic Pit Structure associated with Durrington Walls is not in the immediate vicinity of the proposed location of the Eastern portal of the A303 tunnel, the portal is located between the Stonehenge Avenue and</p>	<p>As noted in the Applicant’s response to the Stonehenge Alliance [REP7-021 para. 6.4.15] “<i>the existing A303 currently severs the Avenue just to the east of King Barrow Ridge and has a Large Adverse effect on this scheduled monument. In comparison the Scheme will result in a Large Beneficial effect on the Avenue [see</i></p>



	<p>the Pit Structure. Initial viewshed analysis by Simon Banton has established the potential significance of the visual relationship between these elements of the Stonehenge landscape, and this relationship should be preserved and enhanced.</p>	<p><i>the HIA, APP-195; pages 354-356] through the removal of the existing severance caused by the current A303, the removal of much of the existing aural and visual intrusion of traffic on the A303, the restoration of the physical connectivity along much of this important prehistoric ceremonial route, and improvements to the integrity and setting of the monument.”</i></p> <p>The Applicant contends that the eastern portal will be constructed within the base of a dry valley, to the east of the Avenue, and the tunnel portal concealed with a grassed canopy. The existing surface dual carriageway will be removed and will be grassed over including where the Avenue is currently severed by the existing A303 surface road. This will allow safe crossing of the Avenue at this point and the potential future reconnection of it as a processional route. The setting of the Avenue following the construction of the Scheme will therefore be improved. The impact of the Scheme on the setting of the ‘new discoveries’ – which are composed of large buried geophysical anomalies with no surface expression – is assessed in the HIA Addendum [TR010025-001980, section 6] as a Neutral effect.</p> <p>The removal of the existing A303 surface dual carriageway and its aural, visual and traffic (including current severance) and the hiding of the eastern portal in a dry valley under a grassed canopy will remove the severance and improve the setting of the Avenue and its visual, topographical and contextual relationships to other monuments. This includes the ‘new discoveries’, situated to the north-east and views from the Avenue, towards the features and the eastern horizon.</p>
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10.3

There are currently 21 pits that have been identified in the Neolithic Pt Structure. Of these, 9 have now been affected by recent development, including 7 by the recently completed housing development for the Army Rebasing project to the East of Larkhill, in the buffer zone just to the North of the World Heritage Site boundary. The unexpected discovery of the Pit Structure emphasises that the Stonehenge landscape contains monuments that are not well understood and demonstrates the fragility of the archaeological record.

The Applicant refers the Secretary of State to the responses of Wiltshire Council [TR010025-001968] and that of the National Trust [TR010025-001975] with regards to the evidence base and the interpretation of the 'new discoveries', as put forward in the 2020 Stonehenge Hidden Landscapes Project (SHLP) Paper. Notwithstanding this, as a precautionary approach, the Applicant has undertaken Addenda to the ES [TR10025-001979] and the HIA [TR010025-001980] to assess the impact of the Scheme on the 'new discoveries'. The conclusions of these documents make clear that the Scheme will not result in any new Likely Significant Effects or a change to the overall impact of the Scheme on the OUV of the WHS as a result of the publication of the 'new discoveries'.

The DAMS [TR010025-001951] provides a comprehensive strategy for the mitigation of impacts on known and unknown archaeological remains. Developed in consultation with members of the Heritage Monitoring and Advisory Group (HMAG) and with input from the Scientific Committee, the DAMS captures current research questions and thinking; its reflexive and iterative nature provides ample scope to address discoveries during the mitigation programme, and to take account of emerging discoveries, theories and understanding within and beyond the WHS. The scope of the DAMS provides for site-specific research questions to be developed with input from specialists, for natural features containing cultural material to be fully excavated, and for the iterative development of strategies that respond to the nature and significance of the features encountered. These provisions provide ample scope to address discoveries during the mitigation programme (during advanced works and construction), and to take account of new research within the WHS.



10.4	<p>Several of the pits were excavated, but their significance was not recognised, supporting Garwood’s view (paragraph 4) that the evaluation process that has been undertaken may not be adequate within the World Heritage Site.</p>	<p>The Applicant disagrees that ‘the archaeological evaluation process that has been undertaken may not be adequate within the WHS’. The Archaeological Evaluation Strategy was approved by HMAG (which includes Historic England, Wiltshire Council, the National Trust and the English Heritage Trust) and following input from members of the Scientific Committee (a panel of Independent Experts on the archaeology of the WHS) prior to implementation including consideration of the latest scientific techniques and methods of archaeological evaluation.</p> <p>The Applicant does not accept that the archaeological evaluation undertaken for the Scheme is inadequate. The evaluation strategy applied a combination of non-intrusive surveys and trial trenching in accordance with standard practice and guidance. The extensive use of trial trenching to validate the Applicant’s geophysical surveys results contrasts with the very limited coring and lack of excavation in respect of the ‘new discoveries’ as described in the 2020 SHLP paper. The archaeological evaluation results, combining geophysical surveys with testing by trial excavation, form a robust baseline on which to make assessments of the impacts of the Scheme upon archaeological remains [see TR010025-001981; section 2; and the written summaries of the Applicant’s oral submissions made at hearings on 5 and 6 June 2019, REP4-030, items 5 (i) and (ii)]. The robustness of the evaluation strategy is demonstrated by the approval by Wiltshire Council and (for sites within the WHS) HMAG of the AESR, OWSI and individual SSWSIs; and by the monitoring of the implementation of the strategy on site and approval of the resulting evaluation reports.</p>
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10.5

We have particular concerns about the location of the Western portal and the negative impact that this will have upon the setting of the Winterbourne Stoke barrow cemetery. Garwood identifies the large pit/solution hollow 24105 as being of potential importance and that there is a not a good match between the geophysical surveys and the archaeological evaluations that have been carried out. This is a particularly sensitive area, given the proximity of the Wilsford shaft. We feel that this supports our statement in 2018, that :-

- *We would prefer the tunnel to be extended beyond the western boundary of the WHS so that there would be no requirement for a damaging cutting within the WHS.*

*We are particularly disappointed that the results of the Stonehenge Hidden Landscapes project were not used to inform the development of the current scheme*

With regards to the impacts of the Scheme upon the setting of the Winterbourne Stoke Crossroads Barrows, the Applicant has provided a very detailed response to this in its Comments on any further information submitted at Deadline 4, [REP5-003, paras. 34.1.6].

As set out in the Applicant's comments on any further information at Deadline 4 [REP5-003, para. 34.1.5] to assertions made by the Consortium of Archaeologists "*The Applicant recognises the significance of the Winterbourne Stoke Crossroads Barrows. Development of the Scheme design has sought to remove the impact of the existing A303 and the Longbarrow roundabout and associated lighting from immediately adjacent to the Winterbourne Stoke long barrow itself, at the southwest end of the group. The new road alignment would be 150m south of the existing alignment and placed in deep cutting to conceal the sight and sound of traffic in views between the Winterbourne Stoke Crossroads Barrows and the Diamond Group, the Wilsford Barrows and the Normanton Down Barrows [...]* These improvements would deliver substantial benefits to the setting of the barrow group." The Applicant therefore strongly disagrees that the Scheme, with its retained cutting and the position of the western portal hidden in the landscape at the head of a dry valley has the negative impacts asserted by the Wiltshire Archaeological and Natural History Society.

The Applicant has previously responded in rebuttal [see TR010025-001981, sections 2.4 and 2.5] with regards to the quality of the geophysical survey results and the assertions of Paul Garwood that certain features were not identified by the Applicant's geophysical surveys. With reference to solution hollow 24105, the Applicant's Overarching response [TR010025-001981] states "The magnetometer survey did identify the large pit/solution



feature 24105 (anomaly 030), which corresponds with a ferrous response [REP1-045 & 046]". This therefore confirms that the Applicant's geophysical survey was not defective as claimed. The Secretary of State should also note that the feature will be preserved in situ to the south of the construction footprint for the western approach cutting [TR010025-001979; para. 6.1.4 (Anomaly 030)] by the Scheme design.

Heritage has been a key consideration during route selection and consultation. Cultural heritage is one of the objectives for the Scheme defined in the Department for Transport's Client Scheme Requirements: to help conserve and enhance the World Heritage Site (WHS) and to make it easier to reach and explore [APP-294, VI]. The preferred route was carefully chosen to minimise effects on archaeology, and a comprehensive programme of archaeological evaluation surveys has informed the Scheme design to limit direct physical impacts as far as practicable, including limiting impacts on archaeological remains that contribute to the OUV of the WHS, including the avoidance of sensitive assets such as the Wilsford Shaft.

Examples of how the design has been developed to limit direct impacts on archaeology include the choice of a northern bypass of Winterbourne Stoke, the reduced footprint and land-take for Rollestone Corner, and the design and placement of the western and eastern tunnel portals and approaches in areas that have been shown to have limited archaeological remains within their footprint. Further information can be found in the Assessment of Alternatives, ES Chapter 3 [APP-041] and in ES chapter 6, Cultural Heritage [APP-044], section 6.8, table 6.9.

With regards to a longer tunnel, the Applicant has previously responded to this at length to the examination, including its position regarding the longer tunnel options as given in response



to Written Question AL.1.29 [REP2-024] which considers the heritage impacts. It concludes that *“The locations of the eastern and western portals in the proposed Scheme have been identified as the optimum locations when all environmental, technical and economic considerations are taken into account. There is no evidence that the additional investment required to extend the tunnel length would deliver meaningful additional benefits to the WHS that would justify the additional cost.”*

With regards to the Stonehenge Hidden Landscapes Project’s (SHLP) results and dataset, as stated in our Overarching Response [TR010025-001981; para 2.6.2] *“The complete dataset from the SHLP surveys in 2010–2014, or more recently, has not been released into the public domain, for example through deposition of the data or interpretive reports with the Wiltshire and Swindon Historic Environment Record. As such, it has not been possible for the Applicant to review the underlying data that has supported the Durrington Walls discovery. The SHLP project did in 2018 provide to Highways England data and an interpretive report relating to a restricted study corridor, on a commercial basis and subject to an agreement not to distribute further: this report was fully considered by the Applicant in their preparation of the Environmental Statement.”*

10.6	<p>If the Scheme is to go ahead, then it is essential that a full field-walking and excavation programme is carried out across all the areas where archaeology will be destroyed or damaged. Swallow holes, tree holes and other aspects of the natural landscape are now considered crucial if we are to understand the Neolithic world that gave stimulus to monument creation. Vince Gaffney's paper gave some good examples including, incidentally, the flint mines at Durrington that were more than simply economic in</p>	<p>The Applicant agrees that it is essential that a full archaeological mitigation works programme is carried out as part of the Scheme. This programme is set out in the Applicant’s Detailed Archaeological Mitigation Strategy (DAMS) [TR010025-001951]. The DAMS is secured by paragraph 5 of schedule 2 of the Development Consent Order [AS-121]. The work will be fully funded by the Applicant and will be undertaken as advanced works prior to the construction of the Scheme.</p>
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nature. There are others, the Mesolithic pits at Farnham, Mesolithic use of swallets on Portsdown, barrow cemeteries at Tynings Farm (Somerset) and Poor Lot (Dorset), swallets in the Mendips with cultural deposits at depth and the modified solution hollow at Fir Tree Field, Down Farm, Sixpenny Handley, alongside the Dorset Cursus. If the scheme goes ahead it is essential that unhindered archaeological investigation is fully funded and allowed to proceed.

The DAMS sets out the requirements for field-walking as part of its ploughzone artefact collection strategy [TR010025-001951, paras. 5.3.29–5.3.30] and archaeological excavation and recording [TR010025-001951, section 6.3] which includes for the archaeological excavation and recording of natural features (including swallow holes, tree holes and other natural features – see paras. 6.3.42 and 6.3.49–6.3.51).



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