

***The Planning Act 2008 - Chapter 2 Examination TR010025
A303 Amesbury to Berwick Down Improvements***

***Written Submission by the Council for British Archaeology
and CBA Wessex***

May 2019

***Supplementary Observations Regarding
Highways England's Responses to Examination Questions:
Cultural Heritage***

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[**REP2-025** A303 Amesbury to Berwick Down TR010025 Deadline 2 8.10.5 Cultural heritage (CH.1)]

Question CH.1.1 (Completion of evaluation work):

As noted in our comments on fieldwork, major uncertainties arise from the combined limitations arising from technical sampling issues; spatial limitations in application of fieldwork other than geophysics; the failure to use sampling principles to forecast the scale of archaeology likely to be lost, damaged or buried; the unduly low significance attached to small but potentially numerous features highly relevant to OUV; and the technical challenges in achieving *in situ* preservation.

As we have previously noted, the ES and HIA did NOT report the numerous research issues that have been identified by the fieldwork that was done, and has tended to belittle key aspects of WHS OUV without properly understanding the full likely implications of the scheme. It also does not help that the results of previous work relied upon are not provided in comparable detail.

Highways England's reliance on the ES and HIA as providing robust assessments that do not need modification in the light of the fieldwork, is misplaced and does not provide the full picture, especially when considered against relevant policy provisions (see **REP2-075** CBA Appendix D).

Question CH.1.3 (Vibration damage from haulage and compound activities)

The response provided only covers assessment/monitoring processes yet to be decided in detail. Para 6 still provides no reference to relevant technical literature or past case studies of archaeological sites subject to vibration, crushing, compression and distortion. No consideration is given to issues related to soil restoration when temporary works areas are returned to agriculture and how (if at all possible) that would be secured with farmers (see below).

Question CH.1.5 (Changes in Neolithic population)

The response provided is unwarrantedly dismissive of what is a key research issue that is extremely relevant to the OUV of the WHS - and to the proposed scheme given the actual discovery of human remains in graves NOT marked by major monuments. Such unmarked graves dating to different periods in around the WHS are key to understanding the demographic dynamics and esteem accorded to different groups, and this can only be properly understood in the context of domestic activity in amongst adjacent to or more distant from the key monuments as well as both monumentalised and non-monumental burials. Far from '*not having a bearing on the outcome of the examination*' this is HIGHLY relevant in terms of the research issues that the evaluation reports have highlighted as relevant to the aspects of OUV that would be lost, as summarised in our comments on the fieldwork.

Question CH.1.6 (significant archaeological remains to be disturbed by the new Longbarrow junction)

The response provided only covers the Oatlands Hill 'C-shaped enclosure' raising a number of issues. The statement, *the enclosure does not contribute to the OUV of the WHS, being of Late Bronze Age*

date reflects a fundamental problem that the ES and HIA reflect which is a far too narrow view of what contributes to the OUV of the WHS. This does NOT reflect what the adopted Management Plan says about the WHS being important for prehistory generally (not just Neolithic and earlier Bronze Age ceremonial and funerary monuments); nor the importance of what came after or what went before the main period of constructing monuments. While later written evidence of subsequent values is explicitly cited as part of the area's OUV the late prehistoric and Roman periods for which we are reliant on archaeological evidence is also part of this issue.

The response also fails to reflect the significant discoveries made in the other evaluation works in the area of the proposed new junction and its slip roads, though as we noted in our comments, several key research issues relevant to OUV arise in relation to remains that would be lost.

While not directly raised in terms of specifically identifiable remains that might be physically disturbed, the small hengiform enclosure and possible another ring ditch further to the SW on the line of the Winterbourne Stoke Barrow Group would appear to be part of this linear ridge top cemetery and despite the results of the geophysical surveys there is potential for other (perhaps unmarked) burials or other features related to this complex. Even if not, the integrity of the linear cemetery would become even more fragmented including earthworks changing the topography.

Question CH.1.8 (setting of Blick Mead)

All heritage assets have a setting (the surroundings in which they are set), and the issue is first, whether or not those surroundings contribute to how their significance is experienced and appreciated – and if so how; and second, how development will impact on the surroundings and how such significance is experienced and appreciated. The suggestion that the setting of Blick Mead is adequately assessed because it is part of Amesbury Abbey Park misunderstands the concept of setting. The key aspects of the surroundings of Blick Mead that most obviously contribute to its significance and surroundings are its topographical position at the base of the Avon Valley; the water table and hydrological conditions that result in exceptional preservation (including any localised topography or geology that may underlie these conditions; evidence of any foci of Mesolithic activity (eg from flint scatters) in the area – including any as yet undiscovered remains in similar position in the valley; and, further afield, other Mesolithic monuments predating the Neolithic. As a site not visible on the surface understanding and appreciation is reliant on knowledge of the site through other forms of experience (which could for example include on or off-site interpretation). The wooded vegetation of Amesbury Abbey Grade II* RPG is relevant in so far as it may or may not represent some similarity to what is known from paleo-environmental evidence to have existed in the Mesolithic (whether or not a broadly woodland or open environment).

Whether or not the proposed scheme would have a significant effect on the setting of the Blick Mead is uncertain due to limitations of detailed knowledge of the archaeology and full hydrological conditions of the immediate surroundings, though the physical extent of below ground impact and hydrological effects may be limited. The east tunnel portal and cutting would have some impact on the local topography in the side of the ridge between the site and the broadly contemporary major Mesolithic structures at Stonehenge. While this would not add much harm (and the tunnel would reduce that severance), an alternative scheme that removed the A303 altogether from the WHS would both remove this risk of additional harm, and potentially remove the existing impact.

Question CH.1.9 (Temporary and Permanent Effects)

The distinction between temporary and permanent effects is crucial for heritage assets at whatever stage they arise, and this includes indirect effects. Permanent loss of archaeology or other assets

and damage to heritage settings or historic character (generally considered for EIA purposes to last a generation or more) can arise from both temporary construction works and many different physical aspects of the constructed scheme, and from its use by traffic once opened (including noise air quality and additional visual intrusion). After the scheme may become redundant, it would on any foreseeable basis remain a major 21st century structure within the WHS. From a policy perspective permanent loss of irreplaceable heritage is more serious than gains in amenity and access.

There is currently significant uncertainty about whether there would be permanent effects on archaeological remains due to be protected from harm during temporary construction activity because no technical calculations – even at a ball-park level – have been made of what protective measures are required to prevent compaction, crushing or distortion effects under the types and loads of machinery concerned. No consideration at all has been given to the indirect effects of possible subsequent cultivation measures taken to remedy any actual or perceived soil damage.

Question CH.1.15 (Impacts of Construction Works)

The response does not seek to clarify on the basis of the sample so far surveyed by different methods and the relative reliability in identifying different types of archaeology what the true scale of archaeology within the red line area might be. The response also fails to explain what scope there is for redesign within the red line area (ie the extend to which changes in vertical or horizontal alignment or even layout of the new Longbarrow Junction) might result in variance outside the areas most fully evaluated. It is not clear where the temporary bridges for the A303 and A360 would be or whether additional impacts would arise from their foundations.

Question CH.1.16 (Impacts of Haul Roads etc)

The statement *“To protect archaeology and prevent the deformation of topsoil and subsoil horizons, haul roads would be built under a ‘no dig’ solution, wherever possible”* coupled with the provision in the Draft Archaeological Mitigation Strategy that where not possible any archaeological remains would be excavated, provides very little confidence in this proposal when calculations have not been done and no consideration has been given to agricultural soil restoration.

This is further cast into question by the absence of any reference to this issue in the Geology and Soils chapter of the ES (Chapter 10 sections 10.7-10.8) and the statement in the OEMP (General Provisions – Site Management p38) that *“b) temporary earth bunds, created from excavated soil, shall be located around the perimeter of the compounds”* but no reference to haul roads. The air quality provision for Haul Roads in the OEMP says that the Plan would *“d) Impose and signpost a maximum-speed-limit of 15mph on surfaced and 10mph on un-surfaced haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided).”* Speed of heavily laden dumper trucks and other plant has a bearing on the risk of compaction and rutting, and here again there is no clarity of what implications arise for the claimed *“no dig’ solution.”* The OEMP provision for Haul Roads (p67) makes cross reference to the requirements of the Heritage Management Plan.

The more general reference to a ‘Soils Management Plan’ is not evident in any draft form to address this. Given the existence of well-established standards for soil handling and replacement for agriculture it seems very unlikely that the ‘no dig’ solution is any such thing: far more likely the works will involve topsoil stripping with the loss of spatial evidence in ploughzone archaeology prior to installation of geotextile and adequate buffering material. Soil stripping for archaeological purposes is substantially different from general topsoil stripping for construction if *in situ*

archaeology is not to be disturbed, requiring care – to within centimetre tolerances – to remove only topsoil, especially where small shallow prehistoric remains are concerned.

Since this will be part of the preliminary works there is no indication where the fill material to create haul roads and compounds without subsoil disturbance would come from or how they would be placed without damaging archaeology (cf DMRB Volume 10 Section 1 Chapters 5 and 6).

Once construction work has finished, the removal of temporary fill material and replacement of topsoil without compacting it OR running on the exposed archaeological horizon presents a whole extra problem. This is without any *perceived* need for agricultural soil decompaction after land has been returned to farming use.

Overall the provisions for preservation *in situ* outlined to date are theoretical not practical and are not backed up by clear evidence of deliverability. Given the areas concerned, the lack of complete archaeological coverage especially outside the permanent footprint of the scheme leaves great uncertainty. This is especially concerning within the WHS and its environs particularly where archaeology of clear significance has been found outside the WHS in the vicinity of the Winterborne Stoke Barrow Group. The comment that all temporary landtake for haul roads (or other construction works?) would be outside the WHS does not mean that it would be outside the areas that contribute to its OUV.

Question CH. 1.19 & 1.20 (Adverse effects on listed buildings)

As noted in our comments on policy (Appendix d para D 6), NPPF para 193 states that great weight must be applied '*irrespective of whether any potential harm amounts to substantial harm, total loss or less than substantial harm to its significance.*' These matters therefore warrant clarification.

Question CH.1.21 (Mitigation Strategy) and 1.22 (Construction Sequencing) 1.24 (Temporary Infrastructure and Reinstatement of Land Post Construction)

It remains unclear how the various mitigation plans especially for preservation *in situ* will be meshed together. As indicated above, the sequencing of works for the establishment of temporary construction works and soil management is critical but not at all clear. The statement "*Upon completion of construction, where land is not required as part of the Scheme, the haul roads would be returned to the existing land use, pursuant to the terms of the DCO*" is very simplistic and provides no confidence that reinstatement and subsequent use will not cause additional damage to archaeological remains, especially as it is not stated under what the terms of the DCO would be in this respect.

Question CH.1.23 (In-combination effects)

In-combination effects can include both impact interactions (heritage setting issues being an extremely clear example) and cumulative effects of a particular character. Both figure large in the proposed scheme, but are poorly articulated. Setting issues almost involve interactions with landscape, visual and noise intrusion and land utilisation and habitat creation (or loss); some concern hydrology and air quality.

In addition, there are numerous in-combination effects that relate to multiple monuments which in some cases have been grouped arbitrarily rather than on archaeological grounds. The overall effects of the scheme on key characteristics of OUV of the WHS are not analysed. For example, despite fieldwork being conducted on the basis of scientific sampling there is no forecast or estimate of the actual quantity and character of archaeology likely to be disturbed; nor, based on the specific

research themes identified is there any overview of the what the total loss of archaeology would be relative to key OUV issues.

In respect of setting, there is no consideration of how the permanent changes in landform in the ridges in the E and W parts of the WHS would exacerbate rather than reduce the impact of the current road in terms of the relationship between monuments and their surrounding landscape. There is likewise no consideration of the in-combination effects on the OUV of the WHS taking account of effects both outside it (ie the WHS 'environs' or setting - or areas potentially to be included if the boundary were extended).

Question CH.1.29 (ES Appendix 2.2 OEMP)

Please see comments previously submitted (**REP2a-005** CBA –*Supplementary Observations [on].. Archaeological Survey Reports and Draft Mitigation Strategy*) and additional comments above and below concerning mitigation of temporary works and the likely need for prior topsoil stripping of all temporary work areas, which has not been clarified with reference to soil management requirements. The OEMP and DAMS remain insufficient to be confident that additional harm would be avoided or that other sufficiently effective mitigation would be delivered.

Question CH.1.36 (Agreement on Archaeological Mitigation Documents)

There is no indication here of how additional evaluation and/or recording action would be secured for areas affected by any detailed design changes or contractor's works proposals within the DCO boundary. There appears to be nothing in the draft DCO to secure ongoing preservation of archaeological remains on land acquired for temporary use (see above and below).

Question CH.1.37 (Cumulative Impact and sequence of works)

The response does not address the detailed question as to how the cumulative impact of both temporary and permanent landtake would be programmed to ensure fulfilment of both *in situ* preservation and ALL necessary archaeological investigation and recording including the contingencies needed for a) detailed design changes with the DCO boundaries; and b) cases where *in situ* preservation cannot be secured with confidence over every stage of temporary works and landscaping (see also comments on risks of unforeseen discoveries below).

Question CH.1.38 (Sequential Experience of Monuments and Cumulative Impact)

The approach adopted has taken a narrow view of current experiences, not the full potential that could be established were the Management Plan to be delivered in full. With an alternative scheme that removed the A303 and ideally the A360 from the WHS and its setting (or potential westward expansion) the cumulative beneficial effects would be far higher and the additional cumulative negative effects in the vicinity of King Barrow Ridge and the Longbarrow Crossroads Ridge would not only be avoided, but the current impacts of the A303 would be remedied.

Question CH.1.41 (Sequential Experience of Setting of AG03 and AG04: Winterbourne Stoke Barrows)

The question relates to a key aspect of the WHS OUV, which concerns the relationship of monuments to the landscape and the setting of the WHS and how its OUV can be experienced from beyond its boundary. As we have previously commented the ES and HIA have systematically under recognised and/or downplayed these considerations. HE's response is another example of the dismissive approach taken to this key aspect of the how the relationship of monuments to topographical position is experienced moving through the landscape.

Question CH.1.42 (AG13: The Diamond Group Severance of Linear Earthwork)

It is clear that this feature would be severed and that it is part of a designated monument: it is large and well-preserved below ground. The loss of a 60m length of a major prehistoric boundary of national importance is not trivial. The assessment of its being a 'minor' impact after mitigation is irrelevant to the planning balance, since that must be carried out **without** taking account of the ability to record remains that would be lost. It should also be noted that according to the mitigation strategy between 60% and 80% of the affected length would NOT be excavated (cf REP2a-005). Given the size of the ditch this is a significant amount of deposit to be lost without record.

Question CH.1.44 (Treatment of the Avenue)

The statement that the Avenue would be unaffected by the scheme is patently wrong. Its being grassed over (and potentially readily marked out by mowing, or even by partial restoration of or replication of its banks) would mean that it could (in principle) be better experienced in terms of following its course; but this would be at least partially offset by the excavation of a substantial cutting and creation of the E tunnel portal in the side of the ridge not far from it. This impact on its setting and how that would be experienced (another case of the OUV relationship between monuments and the landscape) has not been identified or assessed.

Question CH.1.50 (Integration and Co-ordination of Method Statements)

As noted above, the need for co-ordination of archaeological and soils Method Statements and the DCO provisions for return of temporarily acquired land to agriculture is critical to achieving the proposed archaeological mitigation for very substantial areas, some of them – such as the area around the Winterborne Stoke Barrow Group – of significant sensitivity (as we have noted in our comments on the fieldwork evaluation reports). HE's response gives no indication of how this is to be achieved since the soil handling and archaeological *in situ* preservation requirements are in potentially serious conflict that has nowhere been resolved in the documents submitted. It is NOT at all clear that archaeological preservation would take precedence, as is implicit in the stated fall-back position of undertaking additional investigations if preservation *in situ* cannot be achieved. Given the high importance put on preservation of soils and their careful handling (as required by DEFRA's *Construction Code of Practice for the Sustainable Use of Soils on Construction Sites* and several BSI standards) it seems unlikely that archaeological considerations would take precedence. The statement on soil handling for HS2 for example¹ makes no mention of archaeology and states "Where construction sites and haul routes are returned to agriculture this will require loosening of the subsoil prior to topsoil placement. Following restoration, affected areas will enter into a period of aftercare of up to 5 years, and agricultural underdrainage may be required."

The response gives no indication of how specialists and government/local government/statutory agencies responsible for covering different fields will be involved in a co-ordinated way.

Question CH.1.52 (Unforeseen finds)

The response does not fully address the risks related to unforeseen finds.

First, as explained in our main statement and observations on fieldwork results there are inherent uncertainties in the evaluation fieldwork sampling methods used in relation to the likelihood of key complex archaeological remains of types known to occur in the WHS but intrinsically difficult to

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https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/628465/E19_Soil_Handling_for_Land_Restoration_v1.0.pdf

locate by geophysics – or locatable but not evaluated – having being found (for example complex burial deposits; ritualistic deposits; ritual wells/shafts). Geophysics has been very poor at identifying small but complex archaeological remains such as human burials not marked by ditched monuments. Only a tiny proportion of potential archaeological remains identified by geophysical survey have been tested by trenching.

Second, the extent of trenched evaluation has been limited within the scheme boundaries and any significant redesign or adjustment of alignments could alter the location of impacts, but there is no clear provision for evaluating the implications of such changes (we noted the case of the A419/A417 scheme where such a design modification led to a major reprogramming of construction).

Third, as discussed above there is very significant uncertainty regarding the deliverability of the preservation *in situ* proposals for temporary work areas given soil handling requirements. This raises further major uncertainties in respect of unforeseen archaeology turning up in areas not fully evaluated. This is especially significant since the establishment of temporary works areas are likely to be on the critical path for commencement of works.

The response does not address these matters, and in particular does not demonstrate that there is no risk of significant discoveries requiring lengthy investigation on the critical path for construction works. It is not clear when or how ‘*a minimum period of time to deal properly with any unexpected finds*’ would be defined, but it is assumed only after the discovery has been made. It will be noted that this is to be a matter for Highways England and the Contractor to agree, both of whom will be under very significant pressure to deliver the project on time and in particular not to delay the start of tunnelling. It appears that there is no provision for curatorial oversight of this by Historic England, WACS or HMAG.

Taken together, especially in view of the types of archaeology likely to be encountered that contribute to the OUV of the WHS and the archaeology of other parts of the scheme, this leaves a high risk of archaeology being compromised and/or construction schedule being disrupted unless major time contingencies are made for early, archaeologically-controlled stripping of all areas of landtake not guaranteed to be preserved *in situ*. At present these seem likely to be only areas of mounding where topsoil is left in place and material dumped from on top of previously dumped material (cf *DMRB Vol 10 Section 1 Chapter 6 6.3*). The draft DAMS does not adequately provide for this, and no timescales have been indicated.

Question CH.1.61 (2018 response to ICOMOS regarding option F010)

See separate observations on alternatives (CBA REF 20019887 3b)