From:	Neil Redfern
To:	A303 Stonehenge; TRANSPORTINFRASTRUCTURE@dft.gov.uk
Subject:	Highways England's Application for a DCO for the A303 between Amesbury and Berwick Down.
Date:	28 September 2020 19:58:05
Attachments:	CBA Submission SofSt consultation 3 covering letter final.pdf A303 Sec of St consultation 3 CBA Submission final.pdf

Planning Act 2008 and The Infrastructure Planning (Examination Procedure) Rules 2010
Highways England's Application for a Development Consent Order for the A303 between Amesbury and Berwick Down.

For the Attention of Secretary of State for Transport,

Please see the attached letter and supporting that follows your letter of 20th August 2020, which in turns follows representations made in response your letter of 16th July.

Please do contact me if you require any further information.

Regards
Neil Redfern

Neil I Redfern
Executive Director | Council For British Archaeology | 92 Micklegate | York | YO1 6JX
Email: neilredfern@archaeologyuk.org
[redacted]
www.archaeologyuk.org

Council for British Archaeology

The Rt. Hon. Grant Shapps, MP, Secretary of State for Transport,
c/o Ms Susan Anderson, Head of Transport Infrastructure Planning Unit,
Great Minster House,
33 Horseferry Road,
London
SW1P 4DR.

28th September 2020

By email to PINS A303Stonehenge@planninginspectorate.gov.uk and DfT TRANSPORTINFRASTRUCTURE@dft.gov.uk

Dear Secretary of State,

A303 AMESBURY TO BERWICK DOWN DCO APPLICATION (TR10025)

Secretary of State's Letter of 20 August Requesting Comments on Representations Received in Response to the Secretary of State's Consultation Letter of 16 July 2020 in Respect of

(i) Final Comments on Archaeological Find within the World Heritage Site

(ii) Comments on Other Information Received by the Secretary of State

(iii) Comments on DCO Drafting - Articles 22 and 50

Representations of the Council for British Archaeology

The Council for British Archaeology acknowledges your letter of 20th August 2020, following representations made in response your letter of 16th July, and is pleased to note that you have further requested recipients to

- provide "final comments they have on those representations"
- comment on the other information produced by the Applicant
- submit any comments they may have on the representation about redrafting of articles 22 and 50 of the DCO and associated changes to the explanatory memorandum.

Our comments are attached. We have structured them as previously to reflect the Secretary of State's original Request, as followed in the Recommendations we made in response to that, which we have repeated (highlighted blue) as the basis on which we have judged the responses. At the same time we have divided them between the three topics identified in your letter of 20th August:

- **Part 1** of these comments are our "final comments on the representations" made in response to the Secretary of State's letter of 16th July
- **Part 2** of these comments concern *"the other information produced by the Applicant"* and the Applicant's "*representation .. in respect of a DCO drafting issue, relating to Articles 22 and 50 in the draft DCO"* and *"Explanatory Memorandum"*

We have adopted the same approach to referencing as before, but where we make frequent references to particular documents such as the ES and HIA we have only given a direct link at the first mention.

We are very disappointed that the Applicant's response and the other information submitted, falls a long way short of what we recommended. This also applies to the responses of Wiltshire Council in particular and Historic England.

Council for British Archaeology
92 Micklegate, York
YO1 6JX
Tel: 01904 671417

Archaeology for all
www.archaeologyuk.org
info@archaeologyuk.org

Our overall conclusion is that we have no reason to alter or withdraw any of our original recommendations and commend them again to the Secretary of State. We also note that there are many additional errors, inconsistencies, issues misconstrued, and omissions that need to be addressed. This includes ongoing failures to release primary baseline data, and failure to complete and lack of acknowledgement in the ES of non-completion of the *Archaeological Evaluation Strategy*, or to make ~~make~~ the *Strategy* available to the Examination.

In once again commending our previous recommendations for the Secretary of State's further consideration, we request that they are reviewed afresh in the light of both the original detailed rationale we presented and the additional evidence and reasoning we present here.

Because of the far-reaching implications and the various threads of evidence that they follow, we continue to believe that the Examining Authority should be asked to review the implications and provide further advice.

As we did in our evidence to the Examination and our letters of 27th May and 13th August, **we urge** the Secretary of State to take a precautionary approach towards preserving Britain's internationally important archaeology for future generations.

Yours sincerely

[redacted]

Neil I Redfern
Executive Director
Email: neilredfern@archaeologyuk.org

[redacted]

A303 AMESBURY TO BERWICK DOWN DCO APPLICATION (TR10025)

Secretary of State's Letter of 20 August Requesting Comments on Representations Received in Response to the Secretary of State's Consultation Letter of 16 July 2020 in Respect of

(i) Final Comments on Archaeological Find within the World Heritage Site

(ii) Comments on Other Information Received by the Secretary of State

(iii) Comments on DCO Drafting - Articles 22 and 50

Representations of the Council for British Archaeology

Introduction and Summary

These comments are structured as previously to reflect the Secretary of State's Request, and are divided as between the three topics identified in his letter. We understand in relation to these that:

i. The request for *Final Comments on Archaeological Find within the World Heritage Site* concern matters related to the Secretary of State's original request for comments on the *"implications of the archaeological find for the Development and any harm it may cause to the World Heritage Site"*
ii. The request for comments on *Other Information Received by the Secretary of State* concerns matters related to the Secretary of State's original request for comments on the *implications for the Applicant's Environmental Statement, including the Heritage Impact Assessment, and the proposed Detailed Archaeological Mitigation Strategy* and is a formal consultation about additional documents submitted by the Applicant as addenda to the Environmental Statement and Heritage Impact Assessment (the DAMS being left unaltered); signposting document for ES corrections and updates; updated DCO explanatory memorandum.
iii. The request for comments on *DCO Drafting - Articles 22 and 50* is a formal consultation about additional documents submitted by the Applicant as changes to the draft DCO, and an explanatory letter from legal advisers.

In our representations to the Secretary of State's second consultation [**CBA SofS 2**] we structured our response according to the two main questions with some sub-divisions into 'Issues', and ordered our recommendations accordingly. We believe that in order to focus on those issues while also following the structure of the Secretary of State's 3rd consultation it will be most helpful to review the representations made and new information received against our previous recommendations. Our detailed comments and reasoning for our views are set out below (p3 ff) following the Summary below.

SUMMARY

(i) Final Comments on Archaeological Find with the World Heritage Site

1. The responses from the Applicant and other proponents of the scheme focus almost entirely on implications of the development for the archaeological find, rather than fully engaging with the wider *"implications of the archaeological find for the development"* (as requested by the Secretary of State). These include wider issues that we and others have raised in respect of baseline data, methodological approach, interpretative assumptions and decision-making in the wider context of WHS and other policy arising from the circumstances of the 'discovery' (including the subsequent development over the N arc, which the Applicant claims destroyed it).
2. The Applicant and others – especially Wiltshire Council – criticise the SHLP claims made and the adequacy of the evidence presented, while defending the original interpretations (made without the benefit of hindsight) as being unshakeable fact. But in doing so they largely ignore (or play down)

several key factors that support the hypothesis and fail to consider the claims against other quoted parallels and sources.

3. They provide only the scantest discussion of methodological and interpretative issues, relying on adherence to process and pre-existing interpretative assumptions rather than any detailed discussion or analysis of basic natural and human processes of deposit formation and what evidence is required to form a reliable interpretation of the actual evidence.

4. As a result, their assessments are flawed and do not adequately identify the implications that the Secretary of State seeks to understand.

(ii) Comments on Other Information Received by the Secretary of State

5. The Addendum to the Environmental Statement and Heritage Impact Assessment contain errors of fact, and misrepresentations and omissions that have affected the assessment of significance of the 'Archaeological Find,' both in respect of the Massive Pit Structure and other broadly comparable anomalies, with wider generic implications that undermine the reliability of the assessment of effects and mitigation proposals.

6. There remain serious flaws in the baseline studies especially in relation to – the survival of the Massive Pit Structure and its relationship to topography and other monuments; the limitations in how much of the Archaeological Evaluation Strategy was never carried out – and not reported as a limitation; serious limitations in the provision of baseline data to an acceptable and consistent standard for the whole scheme (including in particular the WHS). The term 'sinkhole' is applied to a range of large geological or anthropogenic features, reflecting assumptions that tend to inhibit adequate assessment.

7. The Applicant and other proponents of the scheme still seriously underestimate the multiple sensitivities and overlapping settings of major assets that contribute substantially to most of the OUV criteria on the west side of the Avon Valley which are substantially affected by the E tunnel approach and portal. The 'Massive Pit Structure' represents a further addition, exacerbating the serious harm caused to the WHS. This seems incapable of mitigation given the route chosen. For other features, large and small that may be of natural origin but have cultural contents, there is still no assessment of the number and character of such features that would be affected by different elements of the scheme.

8. The multiple flaws in the baseline studies and assessment of effects contribute to a failure of the Applicant or Wiltshire Council or Historic England to recognise the need to amend the Detailed Archaeological Mitigation Strategy (which is the part of the ES setting out mitigation actions) or identify significant problems in its provisions, which may aspire to 'ensure' that such features would be properly dealt with, but are far from secure in guaranteeing this.

9. All these problems are in turn compounded by the failure to consider the wider generic implications of the 'discovery' in relation to UK international obligations and key policy considerations.

(iii) Comments on DCO Drafting - Articles 22 and 50 and Explanatory Memorandum

10. Some of the provisions involve powers to undertake activities that could affect archaeological assets, including known and as yet undiscovered assets of international or national significance. It is not clear how such implications would be assessed and managed and what obligations in respect of archaeology would be transferred to 3rd parties.

11. It should be made much clearer that any works covered by these provisions would be subject to archaeological assessment and suitable mitigation, and this should be explicit in the explanatory memorandum.

DETAILED COMMENTS: PART 1 *OBSERVATIONS ON REPRESENTATIONS MADE ABOUT THE 'ARCHAEOLOGICAL FIND'*

(i) FINAL COMMENTS ON ARCHAEOLOGICAL FIND WITH THE WORLD HERITAGE SITE

ISSUE 1: THE MATTERS RAISED IN THE HIDDEN LANDSCAPES PROJECT REPORT AND REPRESENTATIONS RELATING TO THE ARCHAEOLOGICAL FIND AT THE WORLD HERITAGE SITE…

1a The Stonehenge Hidden Landscapes Project (SHLP) discoveries: 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 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.

Comment: These circumstances are generally recognised in responses, but supporters of the scheme in particular have not looked into the wider lessons to be learned from the circumstances of the discovery, or its context.

2 The "massive late Neolithic pit structure associated with Durrington Walls Henge" reported in Internet Archaeology vol 55: 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 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.

Comment: It is noticeable that the Applicant in their Overall Response [**Highways OR SofS 2**] and others – especially Wiltshire Council [**WILTS SofS 2**] – criticise the SHLP claims made and the adequacy of the evidence presented, while defending the original interpretations (made without the benefit of hindsight) as being unshakeable fact; they largely ignore, misconstrue (or play down) several key factors that support the hypothesis and fail to consider the claims against other quoted parallels and sources.

They express unshakeable faith in the identification of large pit-like features as 'sinkholes' from excavations that only investigated the uppermost ('tertiary') fill. These large pit-like holes or shafts exhibit characteristics similar to the more familiar natural processes of how large ditches that are left open change profile and infill as the sides erode and create primary and secondary fills by natural erosion/deposition process by which all but the very bottom profile is the product natural rather than human action. The Wilsford shaft (see Fig 1) is an extreme example where the unquestionable evidence of human creation in the form of bronze axe and antler pick marks only survived in the un-weathered lowest section below 12m down.

The character of the largely natural processes of initial collapse of sides and primary and secondary infill depends very substantially on the nature of the initial shape of the hole as created by natural chemical and water solution, natural collapse, or human excavation; the character, stability and erodibility of the substrate into which the hole is sunk; the depth and diameter of the void; how long the hole is kept open by natural or human agency; the relative stability and erodibility of substrate, subsoil and topsoil relative to speed of erosion and infill; any human intervention to recut or reshape the hole.

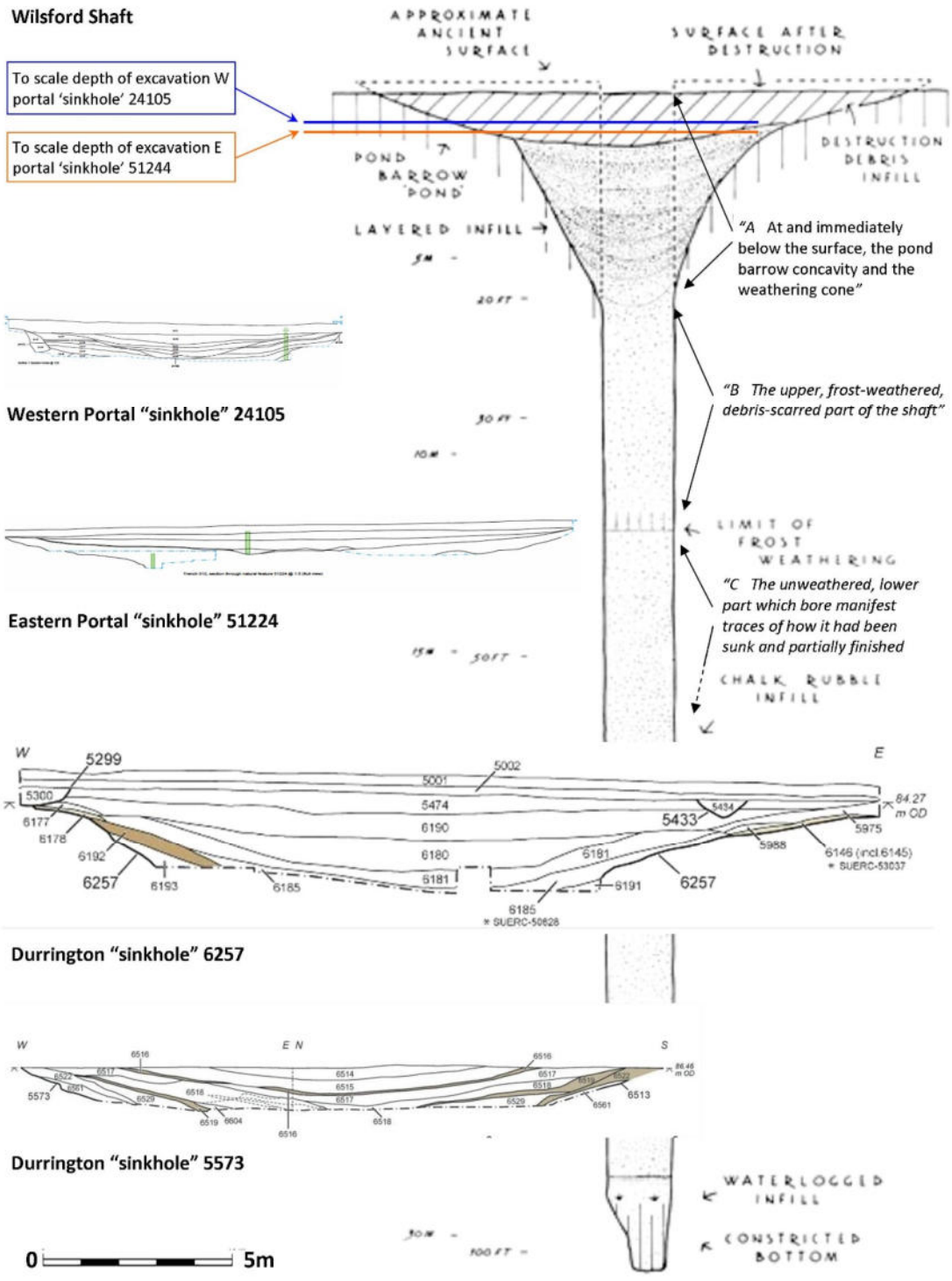

Figure 1 The Wilsford shaft and claimed 'sinkholes'

Once these primary and secondary processes are complete, which create a *primary* infill of the unaltered (if weathered) base of the feature, and the *secondary* erosion cone and its infill, these deposits typically stabilise to a much shallower profile. This stage is characterised by much slower processes of erosion as the edges of the initial weathering cone gradually erode creating a wider shallower profile in which tertiary infill with finer materials gradually accumulates, more likely to reflect human interventions. A final stage of flattening by human intervention, such as bulldozing in the case of the Wilsford shaft or cultivation – as

investigated by DEFRA commissioned research into plough damage to archaeological remains [1] – add further truncation and infill processes.

It is clear that neither the excavations at Larkhill E and Durrington HQ in the N Arc, nor the less interventionist approach used by SHLP in the S arc have fully demonstrated the interplay of natural and human formation processes for these large holes in the ground. The S arc investigations have shown that the features probably differ depending on the substrate; they have also used GPR to characterise the full profile of infill and drilled boreholes to obtain samples of datable material from lower fills. The N arc investigations (as reported to date) have focussed almost entirely on what appear to be typical tertiary fills as characterised by profile, stratigraphy and content. There is hardly any evidence or discussion about the nature of the primary and secondary stages which may be dominated by natural processes of erosion and infill even if the feature is of human origin.

But a key issue not properly discussed by the Applicant or other proponents of the scheme is the significance of the pit alignments and other monuments that clearly seem spatially associated with the circuits of 'massive' pit/sinkhole features – which Wiltshire Council in particular do not even mention, despite the spatial association being a key consideration in their interpretation. In our original submission (in the absence of the Post-excavation Assessment Report being available) we noted 3 of the four lengths of concentric pit alignment, noting the linear magnetic anomaly in that location, and we speculated that the form of the rectangular enclosure aligned on the arc might suggest that it was Neolithic – the evaluation report stating that *"In the absence of more secure dating it is possible this enclosure is Iron Age in date, though a possible earlier date is also likely"* The SHLP report as quoted by the Applicant confirms that subsequent excavation confirmed the fourth post-hole alignment, and we are grateful to Matt Leivers in also clarifying that the enclosure proved to be Middle Bronze Age and contemporary with other activity related to the N arc features. [2]

The Applicant and Wiltshire Council do not seem to recognise any wider implications arising from why original firm assumptions about the features have been challenged. In particular, they fail to recognise that there might be any lessons to be learnt from the points noted above, especially regarding

a) The absence of comparable 'circuits' of natural features (even if some of the 'Massive Pit Structure' features might of natural origin) - Wiltshire Council in particular is very dismissive but fail to indicate any geomorphological or geological explanation of such a formation, and the supposed

[1] http://sciencesearch.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&Completed=0&ProjectID=8412 ; http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&ProjectID=12084&FromSearch=Y&Publisher=1&SearchText=archaeological%20&SortString=ProjectCode&SortOrder=Asc&Paging=10#Description

[2] The Post Excavation Assessment Report for Larkhill E is complete but has not yet been released into the public domain (M Leivers pers comm, email 18-9-20) We are extremely grateful to Matt Leivers for clarifying a number of points on this:

- *"..the relationship to the causewayed enclosure and post alignments – both of which are compelling evidence of there being <u>something</u> there"*
- *The rectangular enclosure is odd. It was exposed in its entirety during the excavations, and many of the questions regarding it were resolved. There were two phases of ditch, the later replacing the earlier almost exactly, except for a relocated entrance. The earlier ditch contained an animal burial … which returned Middle Bronze Age radiocarbon dates. It seems incontrovertibly a Middle Bronze Age structure, so it was indeed earlier than the Iron Age…. It is curious, because as you note it shares an alignment with the solution hollows and post alignments. There is indeed a line of six postholes running north-eastwards just to the north-east of it which are without any sort of dating evidence. They could be part of the Middle Bronze Age activity … but they lie on the line of the post alignments inside the solution hollow line which elsewhere are dated to the Late Neolithic or Early Bronze Age.*

association between the N Arc and the dry valley has been seriously misconstrued (see below, ES Addendum HIA etc)

b) The further implications concerning how the arbitrary and unsatisfactory boundary of the WHS in terms of having become so out of date, not including or only partially including major monuments or monument groups that contribute to its OUV [**REP2-070** para 69; **REP6-084** pp. 57-62].

c) The fundamental difference between research- and development-led excavations, and the major uncertainties and risks posed in the potential irretrievable loss of archaeological remains whose significance and importance to the OUV of the area and to research issues for future generations has yet to be recognised [**REP2-070** para 69]. The Applicant and other proponents of the scheme fail to see the point that whereas the recent discoveries in the N arc are now rendered inaccessible and built over so almost impossible to manage in a meaningful way – albeit NOT completely destroyed as the Applicant erroneously claims (see below HIA addendum), the SHLP discoveries in the S arc remain open and available for future research.

d) Wiltshire Council and the Applicant apply double standards in promoting an evaluation approach in which *"All field work has been designed to have the minimum impact possible"* [**APP-044** para 6.6.14], which has had the effect of leaving major consequential uncertainties for large areas under major development threat, while then criticising the minimalist intrusion by SHLP as having adopted insufficiently thorough methods to substantiate the full character of non-threatened features.

Other large solution hollows, pits etc noted in Internet Archaeology vol 55 – 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.

Comment: In their generally dismissive comments both the Applicant and Wiltshire Council refer to the wider results of SHLP and carp at it not having been released, yet seem unaware of that they have not 'released' for scrutiny in the Examination any of the other geophysical survey reports for areas affected by the scheme within the WHS that they refer to.[3]

They offer almost no discussion of the numerous different interpretations given to such features, present no information about what evidence is crucial to determining the geomorphological and cultural processes of creation and infilling, how both natural holes and hollows and pits, ponds shafts and wells created by people can involve very similar processes of infill – especially in the uppermost levels.

There is no evidence that they have checked whether the numerous references to the importance of such human natural interactions are fully reflected in how the DAMS deals with the innumerable features classified as natural but not tested for any cultural connections – either in terms of the specific research issues and challenges they raise or the combination of investigative techniques, methods and sampling

[3] Including University of Birmingham, *"Stonehenge Hidden Landscapes: geophysical survey report (field seasons 2010-2015, abridged results Highways Agency area of interest 2017-18,"* unpublished provisional report for the Highways Agency, 2018.

levels required to elucidate them. Instead, they just reiterate the assumptions that Gaffney et al review, challenging some SHLP identifications against unpublished data.

1b The "Representations Relating to the Archaeological Find at the World Heritage Site" -

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.

Comment: This remains our view in the light of the further representations made by the bodies who raised the issues.

ISSUE 2 IMPLICATIONS OF THE ARCHAEOLOGICAL FIND FOR THE DEVELOPMENT AND ANY HARM IT MAY CAUSE TO THE WORLD HERITAGE; AND….

Comment: It is noticeable that the responses from proponents of the scheme do not fully engage with the *"implications of the archaeological find for the development"* (as requested by the Secretary of State). Instead, they focus almost entirely on the much narrower question of the *"implications of the development for the archaeological find."* These implications are essentially limited to whether and how the scheme would impact the 'Massive Pit Structure' and the other large 5m+ features indicated by Gaffney et al.

"implications of the archaeological find for the development" include wider issues that we raised in our Recommendations 2a and 2b below, and more particularly under 2c in which the circumstances of the 'discovery,' including subsequent development over the N arc are discussed in terms of baseline data, methodological approach, interpretative assumptions and decision-making in the wider context of WHS and other policy.

2a Implications of the 'massive pit structure associated with Durrington Walls henge' for the A303 development: RECOMMENDATION: The Secretary of State may reasonably conclude that the 'Massive Pit Structure' proposed by Gaffney et al, would not be physically 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 ……..

Comment: It is generally acknowledged by responses that the scheme would not physically damage the features contributing to Gaffney et al's 'Massive Pit Structure.' It is also widely accepted that, as a major monument (or even as individual features) part of their significance is derived from their setting. Several comments relate to topography and intervisibility.

The Applicant and other proponents of the scheme mostly see this in terms of a precautionary principle because of outstanding uncertainties about the full nature of the circuit. But Wiltshire Council do not recognise the arcs of features as a monument (or even as individual monuments) and make no comment on any issues of setting arising. Some of their comments apply double standards: thus they are happy to make the most of the claim that the relationship of the N arc to the dry valley is significant in relation to some features being natural solution holes (see below comments on ES and HIA Addenda), but are not willing to treat unaltered natural topography of dry valleys as a key factor in respect of the setting of this and other key heritage assets on the West Side of the Avon valley where the A306 cutting has already had a major impact that this scheme will greatly exacerbate (see comments on HIA and ES Addenda below).

The Applicant takes a very narrow view based on their previous approach to assessment which emphasises extant visual interrelationships between diachronic groups of monuments arbitrarily defined on the basis of proximity whose interrelationships with other monuments changed over time, which as we have already explained [**REP2-070** para 54-61] falls short of modern assessment standards. Notwithstanding the

statement in para 2.9.1 of the HIA Addendum (see below), virtually no consideration is given to the landscape scale of the proposed monument or its relationship with topography, its likely significance when extant or the evident (albeit not yet fully understood) relationship between the circuits of massive features and post alignments and other features as major features in the landscape. Other proponents of the scheme who comment on this tend similarly to be fairly dismissive of setting as an issue.

But taking a wider (and more precautionary) view, ICOMOS UK [**ICOMOS SofS 2**], the Consortium of Archaeologists [**CoA SofS 2**] and Stonehenge Alliance [**SA SofS 2**] in particular take a much broader view in keeping with the potential conceptual significance of the 'Massive Pit Structure' as a major monument, which we agree is the correct precautionary approach.

……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.

Comment: It is noticeable that the Applicant continues to adopt an approach that gives very little consideration to these aspects of setting despite their importance in relation to key aspects of OUV. The Applicant[4] continues to appear not to recognise that the largely intact physical topography of the WHS is key to understanding and appreciating interrelationships between monuments and their relationships to the landscape is the only characteristic (other than the celestial firmament) that survives almost unchanged since prehistory. They have not recognised that the cutting of the current A303 at the N end of Vespasian's Camp was the first major intervention that had serious impacts on the setting of multiple heritage assets and that what is now proposed greatly exacerbates that harm [**REP6-084** pp. 16-24 (cf Main HIA **APP-195** pp 618-620)]. They continue not to recognise the significance of effects on the Avenue, Vespasian's Camp and the Amesbury Designed landscape (which they do not even understand is a quintessential physical expression of the OUV of how the prehistoric landscape influenced later writers, artists, architects and antiquaries).

By contrast, Simon Banton's analysis [**SB SofSt 2**] reinforces the point in terms of the kinetic appreciation and understanding of the landscape setting of the 'Massive Pit Structure' in relation to the Avenue.

2b Implications of the other 5m+ features identified by the Internet Archaeology paper for the A303 development: 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, and that a more thorough review and in particular far stronger acknowledgement of uncertainties is called for.

The Applicant and other proponents of the scheme have limited their consideration to the 'Massive Pit Structure' and the 5m+ diameter features that Gaffney et al have plotted. They have thus considered the implications of the scheme for the 'discovery', NOT as the Secretary of State requested, the implications of the 'discovery' for the scheme.

They largely fail to address why it is legitimate for SHLP to challenge previous interpretations with new evidence and (in the case of the proposed Massive Pit Structure combining 75% pre-existing evidence and 25% new discoveries) and posit an entirely new hypothesis of a major, previously unrecognised monument

[4] And by implication of their silence on the point, most other proponents of the scheme

of major scale, which in turn has implications for other large geophysical anomalies of similar character. Much of this revolves around uncertainty, but this is not one sided:

- The SHLP paper has highlighted the uncertainties implicit in multiple and radically different interpretations of the same features in the S arc;
- By pointing out that natural sinkholes do not occur across the landscape in such a dense, orderly manner spatially respected by post alignments and other prehistoric features, Gaffney et al have cast major doubt on whether all the features are natural even if some are;
- This in turn casts some doubt on whether excavations exposing only the final filling of such features can fully characterise them any more than the largely nonintrusive) approach adopted by the SHLP team can (as they accept);
- The incompleteness of excavation and lack of any discussion related to methods of excavation deployed in other cases, means there is no consideration, let alone agreement on what evidence – both from a geomorphological and archaeological point of view – would be needed to understand such features fully. This leaves further serious uncertainty as to what should be prescribed in terms of methods and minimum sampling rates to be sure that investigations are thorough and evidence is sufficient for a clear understanding of the origins and subsequent history and use of such features.

Both the Applicant and Wiltshire Council fail to consider possible parallels elsewhere cited by Gaffney et al, or how other more complete approaches to excavation might ensure far greater clarity and understanding. They rely on the general flexibility of the DAMS to deal with unexpected discoveries as a mechanism to deal with such features (whatever their) size, thereby just postponing clarity, failing to acknowledge the full limitations of the ES in not extrapolating the full scale, extent and character of features needing excavation across the scheme footprint – including areas as yet unevaluated where it may prove impossible or in appropriate to achieve currently proposed preservation in situ measures. This adds to the major risks of delaying the development programme if the archaeology is to be fully investigated – or substantially compromising the archaeology [**REP6-084** pp 11-12; **REP8-036** pp 28-30].

2c Wider generic implications raised for the A303 scheme: 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.

The proponents of the scheme have not considered to any significant extent the wider implications of the circumstances of the 'discovery'. The Applicant, Wiltshire Council and Historic England [**HE SofSt 2**] have reviewed the *Internet Archaeology* paper and the circumstances of the how the 'discovery' was made on a presumption of the standard methods and assumptions applied to the development-led work involved having been much the same as proposed for the A303 scheme. They do not acknowledge that – with the benefit of hindsight – these developments involved part what may be a major monument contributing to the WHS OUV being built over without being fully understood (either in terms of its constituent features or as a whole).

They have not questioned how the remaining uncertainties surrounding the discovery and other features of similar ilk might be better resolved. The data sets that they refer to in discussion of Gaffney et al's interpretation include unpublished reports for previous iterations of the scheme that are part of the foundation of the baseline study that the Applicant has chosen not to release. The Applicant's Overarching Response refers repeatedly to the agreed Archaeological Evaluation Strategy (a document that was not put before the Examination). It is unclear if they mean a document referred to in the ES cited (p 6-94) as "*Ref*

6.26: Highways England, 2017. Archaeological Evaluation Strategy Report (AESR). Report HE551506-AMW-EHR-SW_GN_000_ZMS-0001. December 2017". Highways England, Bristol" which we cannot find online and seems to be unpublished - OR the later document with the same number (HE551506-AMW-EHR-SW_GN_000_ZMS-0001), entitled "*A303 Stonehenge Amesbury to Berwick Down Archaeological Evaluation Strategy February 2018"*, authored by the AECOM mace WSP Joint Venture ('AmW'), published by Highways England the which was published online.[5]

Their assertions about the adequacy of evaluation, likely impacts and need to mitigate effects relating to comparable types of feature (both large and small) do not address the cumulative scale and extent of such impacts. Nor do they report or acknowledge as a limitation that a further stage of evaluations set out in the February 2018 *Strategy,* to be completed before the ES and DCO application were finalised, were not done (see further details in comments on the ES and HIA Addenda below).

DETAILED COMMENTS: PART 2: FORMAL CONSULTATION ON SUBMITTED DOCUMENTS

(ii) Comments on Other Information Received by the Secretary of State

ISSUE 3: IMPLICATIONS FOR THE APPLICANT'S ENVIRONMENTAL STATEMENT, INCLUDING THE HERITAGE IMPACT ASSESSMENT, AND THE PROPOSED DETAILED ARCHAEOLOGICAL MITIGATION STRATEGY."

3a ES Baseline conditions – 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).*

Comments: The Applicant has sought to update descriptions in respect of the 'Massive Pit Structure' and other anomalies identified by the SHLP paper, but does not recognise any wider implications in terms of short comings in baseline information. We note that Wiltshire Council do not recognise **any** shortcomings in baseline evidence. The ES and HIA Addenda as submitted contain significant errors and omissions. None of these addresses the implications of the Gaffney et al paper for similar feature below the arbitrary size of 5m+ - nor do they consider whether any more exist.

The 'Massive Pit Structure'

The ES addendum Paragraph 4.2.8 does not give the depths at which the scientific dates were obtained although this is highly relevant to the interpretation of these anomalies. Paragraph 4.2.10 says

> *A series of large anomalies have previously been investigated by Wessex Archaeology north of Durrington Walls as part of the Army Basing Programme. They were recorded during geophysical survey and trial trench evaluation at the Larkhill (East Site) (Features 10D – 13D), and at the site of the former Ministry of Defence Headquarters building (Features 14D and 15D).*
>
> *The 2020 SHLP paper notes that "The general presumption […] in respect of this group of features was that, while the features were certainly associated with significant archaeological deposits and activity, they were likely to be of natural origin and probably related to a series of solution features following the dry valley."*

[5] https://assets.highwaysengland.co.uk/roads/road-projects/A303+Stonehenge/A303_Archaeological_Strategy1.pdf

This second paragraph is taken out of context and is highly misleading, both implying that the passage it quotes applies to all the features 10D to 15D and not making it clear that the presumption was on the part of the excavators, not SHLP. The full paragraph referred to says:

> *It should be emphasised that surveyors and excavators certainly appreciated the probable archaeological value of these features and noted the general integrity of this group in terms of dimensions and alignment (Leivers and Thompson 2015, 12). Urmston, when discussing three of the pits surveyed (10D, 11D and 12D), commented that* 'the three large circular anomalies are pit-like in character and may therefore represent infilled hollows or pits. The general lack of ferrous responses in conjunction with these anomalies suggests that they were not infilled recently, as modern and historic debris tends to contain magnetic components to some degree, supporting an archaeological interpretation' *(2014, 5). The general presumption, therefore, in respect of this group of features was that, while the features were certainly associated with significant archaeological deposits and activity, they were likely to be of natural origin and probably related to a series of solution features following the dry valley.*

Gaffney et al's own views (quoted in the ES addendum at para 5.1.7) are much more nuanced:

> *That general presumption that the group of features north of Durrington Walls were natural in origin and, probably, solution features gains some support in the geological literature. Such features are relatively common on the chalk and the available mapping is likely to provide an underestimate of their actual distribution (Hopson et al. 2006, 215). Some of the features recorded north of Durrington are set within a slight valley trending west-east towards the Avon. While such a topographic situation can provide the conditions that can lead to the development of solution features, the southern group of anomalies does not align with any similar topographic feature, and actually crosses higher ground above dry valleys. Consequently, the origins of the southern group of anomalies as solution features or doline is less likely.*

They do not express their own views on how tightly the N arc was *"set within"* the dry valley, but the original report on which this is based stated:

> *6.4.2 Bronze Age material was recovered from two natural sinkholes recorded in Trenches 107 and 112. Three roughly circular anomalies approximately 20m in diameter were recorded in the geophysics (Figure 2) following the base of the dry valley on a roughly WSW–ENE alignment. Previous investigations at the former MoD Durrington site (Thompson and Powell forthcoming) 780m to the north east revealed a further two sinkholes on the same alignment and with similar dimensions.*

This makes it clear that only three features were identified as *'following the base of the dry valley on a roughly WSW–ENE alignment'* and it is clear that the two Durrington HQ features were NOT on the *'same alignment'* (ie WSW–ENE) but were oriented roughly WNW-ESE, as well as being outside the base of the dry valley.

Taken as a whole, the majority of the features forming the N arc are NOT on the floor of the dry valley, and its alignment is clearly askew to the line of the dry valley (see Figure 2 below). Furthermore, since the alignments cross and have similar curvatures it is more or less inevitable that a small number of the anomalies would roughly follow its base – in fact only one is on its centre line[6]

[6] Feature (iii) is c.100m W of the centre line of the base of the dry valley, (iv) is c.55m to the NW; 10D and 11D are c.20m to the NW; 12D is more or less on the centre line; 13D is c. 30m to the S; (v) is c. 45m to S; 14D and 15D both lie entirely outside the dry valley to its S.

At para 5.2.2 the ES Addendum states that

> *"Unlike the northern series of sinkholes/dolines which are located along a dry valley to the north of Durrington Walls, the 2020 SHLP paper suggests that the 'southern arc' appears to disregard dry valleys, which occur between Anomalies 7A and 8A, and between 2A and (i), and crosses slight ridges."*

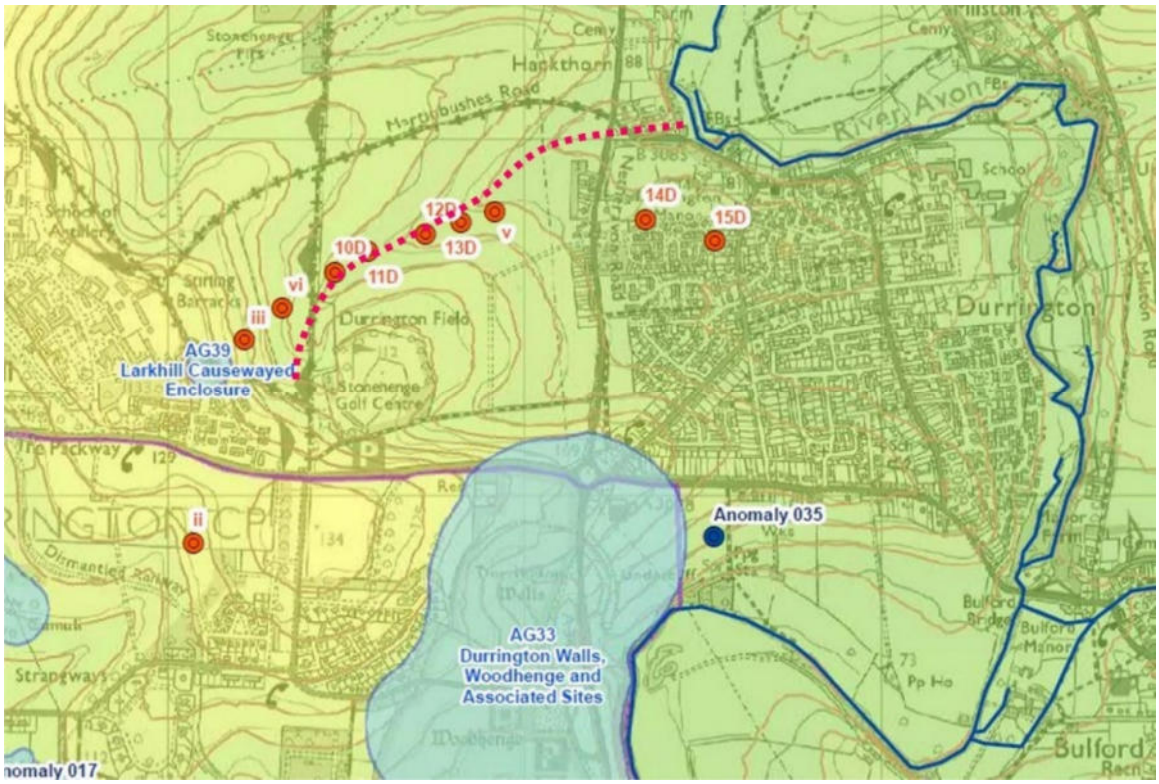

Figure 2: Alignment of base of dry valley relative to N arc of 'Massive Pit Structure'.

The HIA Addendum also seeks to convey the misleading impression that the whole of the N arc follows the bottom of a dry valley and that somehow reinforces their being of natural rather than anthropogenic origin. Para 2.9.2 quotes Hopson et al 2006[7] p 214, that "*Dissolution is enhanced where underground drainage routes are concentrated such as along valley floors and at spring lines"* But this is the only comment relating to valleys (dry or not), and this follows a main introductory statement that –

> *"The main control on near surface solution features is the geomorphic setting and the presence/absence of an impermeable cover. An area of impermeable strata either adjacent or overlying the Chalk serves to concentrate recharge and hence dissolution at the contact between the two rock types. The highest density of sinkholes occurs around the margin of the overlying Palaeogene strata or around the clay-with-flints outcrop."*

The comment on valley floors is very much an adjunct to the main control, and Hopson et al's discussion (pp214-16) mainly concerns other geomorphological and topographic conditions (which neither the HIA nor ES Addenda discuss).

In any event the HIA 2.9.6-2.9.7 goes on to say:

> *This continuum and the mutual influence of nature and culture are particularly important in understanding prehistoric places and in assessing impacts upon archaeological landscapes. "The*

[7] http://nora.nerc.ac.uk/id/eprint/7175/1/IR06011.pdf

fact that some of the pits in the Durrington structure were formed by geological processes does not preclude them from being part of a coherent meaningful monument." (Darvill 2020).

As the Main HIA notes, "intentional references to topographical variations and/ or other aspects of the natural landscape may also have motivated the siting of […] monuments." "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 associations with aspects of the natural landscape that were imbued with meaning by prehistoric communities" [APP-195, 172–3].

But the analysis of setting issues and impacts is notable for not considering these factors different aspects of which have been which have been explained by various respondents including ICOMOS UK, the Consortium of Archaeologists, Simon Banton and ourselves, despite their being clearly reflected in the WHS OUV criteria as well as Historic England's national guidance on setting issues.

The HIA Addendum states at paragraph 2.5.11 that in respect of the features composing the N arc:

Most have been excavated and the land is now developed: sites 10D–15D and (iii) have no surviving archaeological interest or evidential potential, and no remaining Integrity. Their identified significance is assessed as ***Negligible****, as they are assets with little or no surviving archaeological interest.*

At para 3.3.21 it is stated that

"Most of the features in the 'northern arc' have been excavated prior to development and are no longer extant"

and at paragraph 3.3.30

"*The 'northern arc' features (10D – 15D) have been subject to archaeological excavation and are located on land that has been, or is in the course of being, developed. Features (iii) and (iv) are no longer extant."*

This is incorrect: less than half of the features were excavated – and those that were investigated only very partially so. When plans of the development layouts are overlaid on plans of the N arc, it becomes apparent that features (iv), 10D and 15D are definitely under areas of housing; 11D and 14D are at the edge of the developments in each case beneath roads, a verge and a garden (and possibly extend outside the development areas); feature (iii) is within an area retained as green open space; and features 12D, 13D and (v) are unaffected by development.

Thus at least four, possibly six of the eight anomalies making up the N arc seem likely to survive. Even in the case of the three definitely built over, there is no indication how deep they were or that they were dug out during construction as soft spots and thereby destroyed. So even they may partly if not mostly survive, though have been rendered inaccessible for the foreseeable future.

It is inconsistent to dismiss those that survive or partially survive in the N arc as having negligible value while according to para 2.5.16:

For the purposes of this assessment as set out in para. 2.3.2 above, discrete and isolated large pit-like anomalies assessed in this HIA Addendum are assessed as ***potentially Very High*** *value.*

It is also inconsistent in the context of HIA Addendum 3.3.17 referring to the entry in the Main HIA (pp459-60) covering: *"**The Wilsford Shaft** [Designated discrete asset conveying Attributes of OUV of WHS: UID 2016; NHLE 1010833]."* The only reference to what *Attributes of OUV* it conveys is the statement in the main HIA (para 6.10.6) that

> *"several discrete designated assets, in particular Wilsford G1 (NHLE 1010832) and the pond barrow containing the 'Wilsford Shaft' (NHLE 1010833) have been excavated, and so reflect Attribute 7, The influence of the remains of the Neolithic and Bronze Age funerary and ceremonial monuments and their landscape setting on architects, artists, historians, archaeologists and others*."

There is no statement of any other of their contributions to OUV through their form as monuments, location and relationship to other monuments and the landscape (as partially described Main HIA pp 459-460), which if acknowledged (especially as visible features) would suggest a far higher sensitivity of setting than the conveniently minimalist assessment of impact reflects. The approach that this reveals – that excavated monuments can only convey "*The influence of the remains of the Neolithic and Bronze Age funerary and ceremonial monuments and their landscape setting on architects, artists, historians, archaeologists and others"* is patently flawed when the remains are still extant even if emptied – in the case of the shaft it is equivalent to saying that removal of fixture and fittings of a Grade I listed building reduces it to paper significance, and it clearly is not applied consistently across the WHS (eg for the Woodhenge timber circles – see Main HIA pp 506; 618-620).

The assessment of significance of the N and S arcs of pit like features signally fails to discuss the relevance of possible fence lines and a segmented middle Bronze Age enclosure all fairly consistently aligned with both arcs, c.20-30m inside them. But this recurrent spatial association is a highly significant factor supporting its interpretation as a monument, and whatever the origin of its individual constituent features is obviously relevant to the OUV of the 'Massive Pit Structure' arcs in terms of relationships with other monuments and the landscape.[8]

There is no assessment at all of the post-pit alignments and other features as significant monuments in their own right, even though the alignment apparently following the S arc is mostly within the 500m baseline study area.

The applicant has sought to emphasise the pre-existing interpretations of the features constituting the proposed "massive pit structure" despite those interpretations being made without the benefit of being able to consider the full range of evidence now available, or the proposal that they were part of a major monument.

2.5.12 quotes the SHLP paper as saying *"no comparable group of features have been reported from this extensive dataset, and currently the alignment of features at Durrington is unique",* having just observed

[8] In our submission we highlighted this but failed to point out that the linear geophysics anomaly running parallel to the line of features 11D to (v) appears to correspond to what the SHLP paper (quoted by the draft HIA addendum) notes as a *"further alignment of 17 post-holes of varying sizes was recorded over some 260m, south of the line of large pits 11D to 13D (Leivers et al. 2020)."* We are grateful to Matt Leivers (pers comm.) for confirming the fourth pit alignment, and also clarifying that segmented enclosure similarly located inside the N arc is middle Bronze Age. These reinforce the argument for the circuit – including the N arc – being a monument.

(para 2.5.11) that a*ny relation to Attributes conveying the OUV of the WHS is speculative, based on the theory that they may be an underlying geological source for the wider 'massive circle'.* This is misleading: it is based on how Gaffney et al's comments on the relationship of to the base of a dry valley have been misconstrued – and not properly assessed (see above). The SHLP paper acknowledges that some of the features might be natural, to which others were added, but it is highly unlikely that the whole circuit was natural.

Rather than being 'speculative,' the case for the 'massive pit' circuit is based on evidence that is acknowledged as incomplete and circumstantial: that equally applies in a greater or lesser degree to innumerable other assets in the WHS where archaeological evidence is limited. That does not mean it is not a significant basis for recognising what contributes to various aspects of the WHS OUV.

At paras 4.3.14 – 4.3.15, there is an especially muddled account of how the *pit-like anomalies* relate

> *These pit-like anomalies are not currently considered to contribute to any of the Attributes of the OUV of the WHS, based on the available excavated evidence.*
>
> *At present, it is not currently demonstrated whether they are interrelated with the wider complex of Neolithic and Bronze Age sites and monuments within the WHS. There is no excavated archaeological evidence that supports their contribution to the overall Integrity of the WHS. Geological sinkholes are often located in dry valleys (see Hopson 2006, above), and the distribution of sites and monuments in the landscape is linked to natural topography, including dry valleys and associated underlying geological horizons; however, this does not necessarily correlate to a causal relationship between monuments groupings and sinkholes.*

The ES and HIA Addenda fail to analyse fully the significance of the relationship of the Massive Pit Structure other features, notably four lengths of concentric post alignments, the Larkhill causewayed enclosure and rectangular segmented enclosure (see above). In seeking to stress the unproven aspects of the pit circuit hypothesis the Applicant gives far more weight to the equally unproven (or 'speculative') suggestion that the N arc of features as a row of natural sinkholes following the line of a dry valley (see above).

They also signally fail to assess the impacts on setting – and related OUV criteria – in the terms of significance set out in paragraphs 2.9.6 and 2.9.7 of the HIA Addendum, which reflect many of the uses of significance recognised by the Consortium of Archaeologists, ICOMOS UK and ourselves. Instead the assessment is carried out on the very narrow issues (largely inter-visibility and visibility on the ground) that we have already heavily criticised (**REP2-070** pp 18-21 ; **REP2a-005** pp 18-21; **REP6-084**; pp 16-24; **REP8-036** pp 4-7).

Other anomalies identified by Gaffney et al

The Applicant's ES Addendum (section 5.4) seeks to correlate anomalies shown in Figure 9 of Gaffney et al's paper with baseline data to show which are affected by the scheme. Since Gaffney et al. do not themselves list all the anomalies and the location map is small scale, some details are uncertain.

In the case of 'Anomaly 34' the location is assumed to be immediately adjacent to the road, interpreted in the original geophysical report as ferrous. But at the scale of fig. 9 this is also not far from anomaly 11018 described at para 4.2.32 as

*"Approximately 22 m to the north-west of the **11017**, there is a moderately positive circular anomaly (**11018**). This is 5 m in diameter and surrounded by a weakly negative response on the outer edge. This is most likely associated with a large pit-like feature of uncertain date. The proximity to the rounded enclosure at **11016**, may suggest it is associated with contemporary settlement activity."*

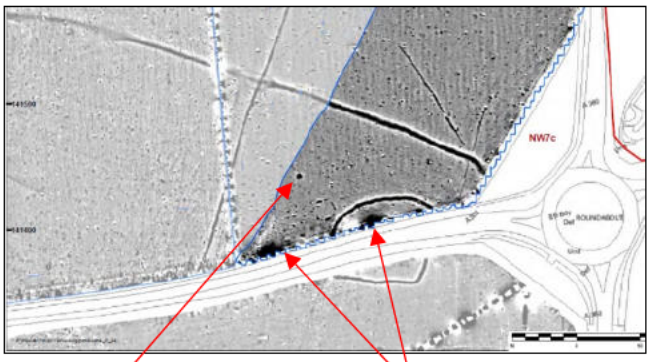

Fig 3: Geophysical anomaly 11018; Possible ferrous

Fig 4: *"Tumulus"* non-designated features HIA fig 6.8

Also unnumbered, a *'Tumulus'* is marked on the base map for the HIA Figure 6C depicting undesignated features, which also shows a blue blob at this location. The closest numbered features shown on ES Fig 6.8 to this location is No. 2004, but the Gazetteer entry for that is described as being east of the A360, not west.

This leaves uncertainty as to the identity of Anomaly 34, that should be resolved and the assessment of impact checked accordingly.

The case of Anomaly 33 (examined in trench 488) illustrates a different problem. Two features are referred to as 'sinkholes' but in fact are very different in character: one 'pit-like' the other linear. This illustrates the lax, indiscriminate use of the term when the features that it encompasses may include natural solution features of various kinds, sinkholes (arising from sudden collapse of the ground into a subsurface void) solution holes and dolines (arising from dissolution of chalk) or various anthropogenic features (eg pond barrows, shafts, massive pits)

Wider implications

Adequacy of Archaeological Evaluation a): trenching. As noted above, the Applicant and Wiltshire Councilseek at some length to dismiss criticisms of the adequacy of the evaluation works, but do not engage with several key issues of concern, some of which have long since been raised [**REP2-070**], others only now emerging.

Some of these raise matters not only of scientific robustness and reporting of limitations and uncertainties (many of which have already been raised before), but others involve issues of omission – whether the ES has accurately reported such limitations and whether the failure of the Applicant to release data is compatible with professional standards and principles of transparency and equity.

Paragraph 6.6.16 of the ES states that

A variety of evaluation techniques were employed, including geophysical survey, plough zone artefact collection (field walking, hand sieved test pits and sieving of topsoil excavated in trial trenches), trial trenching and geoarchaeological investigations. Where site specific evaluation techniques were employed these are outlined in the summary below. Detailed specifications for each of the techniques are given in the project's Archaeological Evaluation Strategy Report (AESR,

2017; Ref 6.26), Overarching Written Scheme of Investigation (OWSI; Ref 6.27) and Site Specific Written Scheme of Investigation (SSWSI) for each area. The results of the evaluations completed to date are summarised below.

6.6.17 Full reports for the evaluation programme will be made available as these are completed.

On p 6-15, reporting the Applicant's responses to consultees' comments raised in the Scoping Opinion the ES states that

Archaeological evaluation was carried out in accordance with the Archaeological Evaluation Strategy, the Overarching Written Scheme of Investigation and Site Specific Written Schemes of Investigation (SSWSIs), as developed with and agreed by HMAG.

The Archaeological Evaluation Strategy[9] dated February 2018 set out *"the extent of previous archaeological field work in relation to the Preferred Route and the proposed draft DCO site boundary ('red line boundary' or RLB) has been mapped in order to identify gaps in spatial coverage"*. The general approach to filling in the gaps in coverage was outlined as follows:

"4.1.7 Ploughzone artefact sampling and trial trenching will focus on areas within the RLB that will be directly impacted by construction. In the first instance areas will be evaluated that are required for construction of the main line and junctions. Evaluation of other parts of the RLB will be considered separately as the Scheme requirements are confirmed, as part of an iterative design process. With regards to geophysical surveys, these will be undertaken to the limit of the RLB in all areas that have not been previously surveyed or do not conform to current geophysical survey standards.

4.1.8 Potential compound and landscape mitigation areas are included within the RLB on a provisional basis only and not all would be used. Evaluation of these areas will be undertaken at a later stage when prospective land uses have been confirmed, prior to conclusion of the EIA process/submission of the DCO application." [Added emphasis]

In respect of trial trenching, the commitment was that:

4.3.12 All non-intrusive survey results will be tested by archaeological trial trenching. The results of previous fieldwork provide varying levels of information, which will require different approaches to further evaluation (prospection for unknown sites and confirmation of sites known from limited evidence).

It was further stated (4.3.17) that the basic sampling standard adopted as 'benchmark' for trenching applicable to all areas was:

"…a minimum of 5% and a maximum of 10% by area taking account of any previously excavated trial trench sample and including an appropriate contingency to extend or add trenches to resolve queries in the field."

For example in relation to areas west and east of Winterbourne Stoke (para 4.4.11): Trial trenching of potential compound and landscape mitigation areas within the RLB in this section of the Scheme will be undertaken at a later stage when prospective land uses have been confirmed (see 4.5 below), prior to conclusion of the EIA process/submission of the DCO application.

The basic purpose of all the trenching was three-fold:

[9] https://assets.highwaysengland.co.uk/roads/road-projects/A303+Stonehenge/A303_Archaeological_Strategy1.pdf

Prospection for unknown sites

4.3.13 Where previous surveys have shown an apparent absence of substantial archaeological remains, additional fieldwork will be designed to test this.

Confirmation of sites known from limited evidence

4.3.14 Where previous surveys have indicated strong surface evidence (such as a dense surface artefact scatter), additional fieldwork will be designed to test whether undetected archaeological features exist beneath the surface and where this is the case to establish their character and extent.

Investigation of known buried remains

4.3.15 Where previous fieldwork (typically non-intrusive surveys) has demonstrated the presence of buried features, additional fieldwork will be targeted to answer specific questions about the nature, preservation, significance and date of the features.

This is perfectly sound – but it is important to appreciate that this is predicated on the fact that different fieldwork methods have different strengths and weaknesses, and that trial trenching has a critical function in reducing uncertainty (see CBA previous representations [**REP2-070; REP2a-005; REP3-049 REP6-084**] and Archaeological Evaluation Strategy[10] paras 4.3.13 to 4.3.15).

The implication, when read in conjunction with the areas proposed for this to be applied to *all areas within the RLB that will be directly impacted by construction*, is **first**, that mitigation requirements should be based on a firm knowledge of the archaeological resource liable to affected; and **second** that to understand the resource fully and appreciate the relative reliability of different methods, results should be reported in ways that *'test'* overall reliability.

Paragraph 4.5.5 of the Evaluation Strategy reiterated that further evaluation of potential compound and landscape mitigation areas would be undertaken once prospective land uses had been confirmed (see 4.1.8 above), prior to conclusion of the EIA process/submission of the DCO application.

Overall, it is abundantly clear from this that the Archaeological Evaluation Strategy as agreed in February 2018 was committed to covering all areas directly affected by construction works, and that the focus of trenching on areas required for construction of the main line and junctions, was only a *'first instance'* provision with a clear requirement to cover the areas directly affected by the compounds and landscape mitigation proposals within the RLB before conclusion of the EIA process/submission of the DCO application, once those areas were set. But while some of those areas were covered (eg tunnel arisings dumping areas on Parsonage Down) taking the trial trenching evaluation plans as a whole (**REP1-050** fig 11.1, **REP1-053** fig 11.1, **REP1 046** fig 11.1 and **REP1-048** fig 11.1) and comparing them with the overall scheme layout (**APP-059** and **APP-061** construction requirements) and the overall archaeological mitigation plans in the DAMS (see **REP9-017** figs 12.1A to 12.1F8 and Appendix D), it is abundantly clear that the Archaeological Evaluation Strategy commitments were very significantly incomplete.

Para 4.3.2 of the HIA Addendum says

> *The Main HIA goes on to note, "It is problematic to assess the value of geophysical anomalies and sites plotted from aerial photographs, such as pits, where the date and character of sites are not proven. Where the date is unknown and the form of monuments is not diagnostic, the value is assessed as unknown." [APP-195, para. 6.10.11].*

This is precisely why further evaluation was needed of areas not so far covered, and why so much uncertainty persists. The Statement of Common Ground with Wiltshire Council indicates that this was

[10] https://assets.highwaysengland.co.uk/roads/road-projects/A303+Stonehenge/A303_Archaeological_Strategy1.pdf

raised in respect of the tunnel arising disposal area on Parsonage Down (which was evaluated) but not other major areas; and the Statement of Common Ground with Historic England and the minutes of the Scientific Advisory Committee Wiltshire Council make no reference to this having been discussed.

In its response [**WILTS SofS 2** p 6] Wiltshire Council states that

> *Across the scheme 90% of features encountered during evaluation had been identified by geophysical survey. This is a very high level of concordance. Of the remaining 10%, the majorly of features were small pits and postholes or tree throws. All the large natural solution features encountered during evaluation trenching on the A303 had previously been identified in geophysical surveys.*

But this fails to recognise how seriously the trial trenching done falls short of the Archaeological Evaluation Strategy's purposes and goals (as quoted above). It is misleadingly dismissive of the potential significance of the 10% missed features, and massively over-confident in not recognising how little is known of the vast majority of the 90% of anomalies that had been identified by geophysics. It entirely fails to make any extrapolation to the whole evaluated area – let alone the whole scheme footprint:

- "Across the scheme" only means those areas that were evaluated in the final phase of work (2018-19), and does not include areas of compounds haul roads and landscaping works, or over the tunnel or other areas within the red line boundary within which detailed design can be altered.
- It does not make it clear that the 10% of features not found, postholes could be part of unidentified structures such as post rings and roundhouses; that small pits are typically the features where intact key assemblages of domestic debris and minor ritualistic behaviour are found, or that 100% of burials were NOT identified by geophysics
- It seems that the Council has not asked the Applicant to use the agreed sampling methodologies to extrapolate a 'baseline forecast' of the number of such features likely to be encountered, or their likely character, so there is no means of telling
    - how many features interpreted as natural solution features (small or large) that might contain cultural material were identified by the geophysical surveys
    - how many of these were encountered in trenching
    - how many of those were excavated to establish their character
    - how many of those were found to contain cultural material
    - how many of those that contained cultural material were bottomed
    - how many of those that contained cultural material were sampled for palaeo-environmental remains
- Nor are these related to the areas of different kinds of impact and mitigation.

As a result, although the data is available, there is no means by which the Secretary of State can have a clear idea of the scale and character of the issue. In EIA terms, this uncertainty is not a technical limitation, nor is there any problem of knowhow to make a much clearer forecast of the baseline conditions and how they would evolve without the scheme: it is a simple failure to fulfil properly the predictive value of archaeological fieldwork.

This is all to do with the issues of reliability that the Archaeological Evaluation Strategy sought to reflect in reviewing the adequacy of previous work and sampling methods for new work, but lamentably failed to build into the reporting requirements, thereby failing to require the reasonably achievable level of forecasting required in Environmental Statements.

Adequacy of Archaeological Evaluation b): geophysics and other surveys. In respect of geophysical surveys, Highway's England's HIA addendum states (para 2.2.2)

> *The Main HIA notes that "Unpublished geophysical survey data for the Scheme and within a limited buffer was kindly released to the A303 project from the Stonehenge Hidden Landscapes Project team." [APP-195, para. 5.36.17h]* (sic - actually 5.6.17h)

It goes on to clarify, which had not previously been explicit (added emphasis), that

> *This data and interpretation of the plots was provided for the Scheme corridor including the DCO boundary, but not for the wider areas beyond this, including the area in which the Durrington Walls discovery is located. As such, the SHLP data relating to the Durrington Walls discovery was not released to the Scheme and has not yet been released.*

It does not define the term 'Scheme Corridor' (and nor does the ES or the DAMS), though elsewhere (para 4.8.16; Appendix E para E1.1.1) the DAMS refers to the 'Scheme corridor' as a broad swathe:

> *This will include both local communities directly impacted by the Scheme, that is, people living and working within the Scheme corridor; visitors and travellers passing through it; and wider national and international audiences.*

Since most of the S arc of Gaffney et al's 'Massive Pit Structure' was within the 500m baseline 'corridor' it is unclear what *the Scheme corridor including the DCO boundary* means in the HIA Addendum. But in any event HIA Addendum para 2.3.1 is not compatible with this, baldly stating as a limitation that

> *The HIA has been prepared in the absence of the full primary geophysical survey datasets and interpretations held by the SHLP, which have been requested but have not been released into the public domain.*

The CBA has repeatedly commented that a serious flaw in the baseline data as presented to the Examination is that **none** of the geophysical reports or plots for the area of the scheme within the WHS has been 'released', nor **any** of the original geophysics reports (see review in Archaeological Evaluation Strategy[11] pp 8-10, Appendix B). As just one example, the ES Appendix 10.4 *Preliminary Sources Study Report* [**APP-276**] states (p13 para 4.1):

> *A programme of non-intrusive archaeological geophysical surveys and intrusive trial trenching (field evaluation) to inform the PCF Stage 2 Options Assessment Phase has been prepared by the AAJV and commenced in August 2016. The results of these surveys will be reported separately.*

But as far as the documentation presented to the Examination is concerned, these and other reports covering the WHS affected by the scheme that were commissioned by the Applicant and used as the part of the baseline studies for this scheme have not been released as part of the application process, and yet have been cited by Highways England and Wiltshire Council in their comments on the representations made.

The professional standard for this is CIFA *Standard and Guidance for Commissioning Work or Providing Consultancy Advice on Archaeology and the Historic Environment*[12] which at pp 5-6 states (Para 3.1, added emphasis) that

> *Advisors must: ….*
> *c. ensure that any investigation has a defined research objective, complies with the appropriate CIfA Standards and guidance and is conducted in a way to optimise a research output proportionate to the nature and results of the investigation*

[11] https://assets.highwaysengland.co.uk/roads/road-projects/A303+Stonehenge/A303_Archaeological_Strategy1.pdf
[12] https://www.archaeologists.net/sites/default/files/CIfAS&GCommissioning_1.pdf

Advisors should

a. ensure that their advice regarding the scope of any assessment of archaeological or cultural heritage significance complies with the relevant CIfA Standard and Guidance, and is sufficient to ensure as full an understanding as is reasonably possible of the potential impact of change on the asset's significance….

In this case the relevant standard and guidance is CIFA *Standard and Guidance for Archaeological Geophysical Survey* (last updated 2016)[13] which advises (added emphasis);

Results *..this section should demonstrate that the archaeological potential of all anomalies located during the survey has been considered and the maximum use should be made of data plots and interpretation plans in this regard. Since the cause of anomalies often cannot be unambiguously determined based on geophysical measurements alone, the text should also be clear about the degree of uncertainty pertaining to inferences drawn from the results.*

Plans/plots *As a minimum the following plans/plots should be included:*

a. Survey grid location (1:2500 minimum)
b. Plot(s) of minimally processed data (1:1000 preferred minimum)
c. Minimally enhanced X-Y traces of magnetic data, where appropriate
d. Plot(s) of enhanced data (1:1000 preferred minimum), grey tone or dot density
e. Interpretation diagram (1:1000 preferred minimum)

While some of the work may have been carried out and reported in accordance with these Standards and Guidance for previous schemes or previous stages of options development, they were commissioned by the same developer and results have been used and cited as part of the baseline study for the ES of the current DCO application, and all of them are relevant to the decision-maker.

It is also relevant that in the Archaeological Evaluation Report it is stated (para 3.1.7) that

Data gaps as mapped on Figure 13 comprise minor areas over the tunnel not previously surveyed. This reflects the extent of 2004 fieldwork but takes no account of gaps in more recent geophysical survey data (see below – paragraph 4.3.8).

The data presented in support of the ES and to the Examination thus falls short both in terms of the reporting standard required and equitable access to environmental information. We believe that there are no legitimate grounds for not having released this information, especially as the interpretation of raw geophysical plots is increasingly debated in the context of the Secretary of State's 3rd consultation.

The works that this strategy set out as the initial priority are those that were referred to in the ES [**APP-044** para 6.4.1f] which states that

Further archaeological evaluation, to augment previous archaeological evaluations undertaken for former iterations of the Scheme alignment, situated along the mainline of the Scheme for the proposed Winterbourne Stoke bypass, River Till viaduct and embankments is in progress (field work due for completion in Autumn 2018). Notwithstanding these supplementary surveys, the full Scheme boundary has been covered by non-intrusive archaeological geophysical survey and this and the results of historic surveys allow a robust assessment of likely significant impacts.

The reports on these works were submitted to the Examination for Deadline 1, but the *previous archaeological evaluations undertaken for former iterations of the Scheme alignment* have still not been released on a comparable basis (despite this being raised repeatedly).

[13] archaeologists.net/sites/default/files/CIfAS%26GGeophysics_2.pdf

To compound this, it is now clear that the further works that the Evaluation Strategy originally committed to in respect of *potential compound and landscape mitigation areas* that were to be completed *prior to conclusion of the EIA process/submission of the DCO application* were never executed – despite the clearly stated strategic need to '*test*' the reliability of non-intrusive survey results.

This is further compounded by the absence of any analysis to allow the results to be extrapolated to the full areas affected by the scheme.

As compared with the Archaeological Evaluation Strategy, Paragraph 5.3.38 of the DAMS gives an entirely different scope of further work yet to be done, stating that

> *There are a number of areas along the Scheme where …. additional detailed evaluation (ploughzone artefact collection and trial trenching) will be carried out at the PW* [Preliminary Works] *stage (Figure 12.1). The results of the evaluation will inform both the scope and type of archaeological mitigation in these areas (refer to Appendix D). Currently five sites have been identified for detailed reconnaissance/evaluation (other areas may be identified at a later date and added to the list):*
>
> - *Two areas North of Winterbourne Stoke that are bisected by the existing B3083 road. These sites are required for landscape fill: Site 40 and Site 41 (refer to Appendix D);*
> - *The proposed Tunnel Production Area at the Main Civils Compound (Site 42);*
> - *The proposed site of a temporary electricity substation within the Main Civils Compound (Site 43); and*
> - *Detailed evaluation in respect of the realigned A360 northern link to the new Longbarrow Junction (Site 19, south side)*

The maps comprising Figure 12.1 also show significant "*Proposed construction working areas"* for which neither preservation nor investigation is proposed, including significant areas around Winterbourne Stoke, the Eastern Portal and proposed Countess East compound. These *"Areas excluded from archaeological mitigation"* are listed in Table 11.5 and mapped in Appendix D (pp 479 to 504) but without explanation of what activities those referred to as *"proposed working areas"* entail.

Some of these working areas excluded from any mitigation are within the additional areas of construction compounds and temporary works or landscaping that were to be covered by evaluation prior to finalising the ES and making the DCO Application in the 2018 Evaluation Strategy.

3b ES assessment of harm: 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.*

As we observed in our comments on the implications of the SHLP 'discovery', the adequacy or otherwise of baseline data inevitably influences the adequacy or otherwise of the identification and forecasting of "likely significant effects". Thus the complete failure to use the archaeological sampling strategy to forecast (even approximately) the overall scale and character of the baseline means that it is not possible to predict in the light of the above sample, approximately how many natural solution features large and small containing

cultural material could be expected to be found in areas subject to different kinds of impact and earmarked for different types of mitigation[14]

As we have previously observed [**REP2-070** pp 12-18] this falls well short of what Schedule 4 Regulations 3 and 6 of the EIA regulations require – especially with regard to *"forecasting methods or evidence used to identify and assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved"* The fact that the ES includes a statement about this does not mean that that the *"forecasting methods"* have been adequate if no attempt has been made to extrapolate, from a scientifically agreed sample, a quantified estimate of the scale and character of the archaeological resources likely to be affected in areas earmarked for different kinds of impact and mitigation. Crucially, the failure to do this is NOT because of *"technical deficiencies or lack of knowledge"* nor (in relation to Schedule 4 Regulation 3) does any such difficulty preclude description of the baseline scenario, including foreseeable changes, based on an assessment entailing *"reasonable effort on the basis of the availability of environmental information and scientific knowledge."*

This shortcoming does not just apply to large – or small – natural features or pits, pond barrows and shafts (or 'massive pits'). As we and others have previously observed, it is a systematic methodological flaw that equally applies to burials and other key features [eg **REP2a-005** paras 1-5].

3c Mitigation and DAMS - 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 mis-interpreted, 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 understanding of the OUV of the WHS and its surroundings.

In their *Overarching Response* to the "Massive Pit Structure" discoveries [**Highways OR SofS 2** section 5.5] Highways England conclude that

> *"The DAMS provides a comprehensive strategy for the mitigation of impacts on archaeological remains, and is fit for purpose both as the basis for development of Heritage Management Plans and Method Statements, which together provide the mechanism by which site works that could affect the historic environment will be controlled; and for the development and implementation of SSWSIs. 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. The Applicant considers that these provisions provide ample scope to address discoveries during the mitigation programme, and to take account of new research within the WHS.*

[14] a) archaeological excavation and recording; b) strip map and record; c) archaeological monitoring and recording; d) preservation *in situ* beneath compounds haul roads and other temporary construction sites; e) preservation *in situ* in areas earmarked for landscape mounding after topsoil stripping f) preservation *in situ* in areas of landscape mounding without topsoil stripping.

The provisions in the DAMS outlined in paragraphs 5.3.1 to 5.3.7 above allow scope to accommodate a range of approaches and the flexibility to take account of emerging discoveries, including the potential for large pit-like features within the Scheme boundary and their possible significance."

This view – supported by Wiltshire Council and Historic England – seems to us far too complacent. We have already pointed out a number of key issues and the following commentary builds on that in the light of the comments of the Applicant, Wiltshire Council and Historic England.

Paragraphs 5.3.1 to 5.3.7 of Highways England's Overarching Response[15] cover the following:

- Paragraph 5.3.1 refers to the flexibility built into the DAMS in consultation with HMAG and the Scientific Committee.
- Paragraph 5.3.2 refers to the process for agreeing Site-Specific Written Schemes of Investigation (SSWSIs) applicable to particular pieces of archaeological fieldwork 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). These are required *"to develop relevant research questions and methodological approaches <u>based on the DAMS</u>"* [added emphasis]
- Paragraphs 5.3.3 and 5.3.4 refer to the development of specialist strategies, including consultation with 'stakeholders' (who are limited to HMAG) and workshops with the archaeological contractor.
- Paragraph 5.3.5 refers to the provisions of DAMS paragraph 6.1.24 for site consultation meetings to refine sampling and methodological approaches in the light of what is revealed by topsoil stripping.
- Paragraph 5.3.6 refers to the provisions of paragraph 6.3.24 for additional targeted geophysical survey following topsoil stripping, but fails to point out that this provision is only for areas subject to full Archaeological Excavation and Recording, not part of the general mitigation process.
- Paragraph 5.3.7 refers to the provisions 6.1.19 to 6.1.21 covering unexpected finds.

As the Applicant notes, these provisions are intended to *"provide ample scope to address discoveries during the mitigation programme, and to take account of new research within the WHS."* But this is not the real issue here: the concerns voiced in connection with the implications of the SHLP paper do not just concern new discoveries, but are as much or more about features that are <u>already known</u> but NOT covered by the DAMS. We fully accept that unexpected discoveries will be made, and we have long argued for a more flexible and responsive approach than was first proposed; we have criticised the mechanistic approach adopted and much more flexibility and a more interactive approach is now provided for. But there is a big disparity between making allowances in flexibility for new discoveries and the need to adjust approaches in the light of what is found and relying on this flexibility to correct what is simply omitted from the DAMS. This raises a technical issue of the relative legal weight of DAMS and SSWSIs. In respect of already known features that are not earmarked for mitigation, how far is it legitimate that deficiencies in the DAMS as the overarching legal document on which SSWSIs are based should be overridden by SSWSIs? This is an especially grey issue if no amendments are made to the DAMS despite such features being identified in the ES baseline and deficiencies in mitigation provision having been formally highlighted in evidence to the Examination or in response to this consultation.

[15] We assume this means paras 5.3.1 to 5.3.7 of the *Overarching Response* not of the *DAMS*.

In this respect it is important to consider what provisions are made in the DAMS for investigation of features such as those highlighted by Gaffney et al.; how far the research issues that they raise are covered; and whether appropriate means and scales of investigations are provided for. It is also very pertinent to consider such provisions are applicable relative to different kinds of impact and different approaches to mitigation.

Paragraph 1.5.2 of the DAMS states that

> *Sites or action areas where the archaeological mitigation approaches will be applied are identified on Figure 12.12, building on the outline presented in the OAMS* [sic]*. Appendix D details the relevant archaeological baseline, survey results and rationale for mitigation for each of the identified mitigation areas. For those areas where archaeological investigation and recording is proposed, relevant research themes and period-based questions are indicated, as identified in consultation with specialists…. Scheme specific research questions have also been developed.*

Footnote 12 states that *Figures 12.1A-F and figures in Appendix D of this DAMS show indicative areas for archaeological mitigation: these are subject to further definition as part of the development and approval of SSWSIs in accordance with sections 8.5 and 8.6 of this DAMS.* Sections 8.5 and 8.6 set out the procedures for consultation on submitted SSWSIs (consultees being limited to Historic England, Wiltshire and the National Trust and Scientific Committee for the WHS) and for their approval by Wiltshire Council. But this does NOT cover the procedures set out in Section 8.7 for Highways England to appeal against Wiltshire Council's decision, nor does that provision allow any right of appeal by any other party such as consultees and advisory bodies.[16]

Paragraph 1.5.3 of the DAMs states that ***Part Two of this document comprises the Overarching Written Scheme of Investigation.*** *The application strategy for each of the mitigation approaches is discussed and outline method statements are presented. These will form the basis of the works to be detailed in SSWSIs. An outline programme for the archaeological mitigation works is also presented* [original emphasis]. In Part 2 references are made to Appendices in Part 3, so these are part of the OWSI, as is the indicative programme shown in Appendix A9.

The other tables and figures set out in Part 3 and other Appendices in Part 4 (Flowcharts illustrating various actions, procedures and lines of communication; archaeological standards and guidance; Overall Environmental Management Plan requirements; and Public Archaeology and Community Engagement Strategy) are NOT included as part of the *Overarching Written Scheme of Investigation* and thus lie outside the scope of the SSWSIs, though formal archaeological reporting is subject to the same procedures as the SSWSIs.

Part 3 (providing the relevant tables and figures) and Part 4 (the Archaeological Research Agenda) and the Appendices providing relevant responsibilities, reporting lines, standards and mitigation action areas, are only part of the OWSI in so far as they are cross referenced in Part 2.

[16] While these procedures might seem rather arcane and unlikely to be the subject of challenge, the need for them has to be viewed in the light of a recent case where HS2 was found in breach of its archaeological obligations by the Court of Appeal *[2020] EWCA Civ 1005*.

As we observed in our previous comments, with regard to research issues there is only a tenuous and very generic coverage of issues related to so-called sinkholes and large pit-like features. The Applicant suggests that this is already covered by the Archaeological Research Agenda, noting at para 5.1.7 that

> *The Research Questions in the DAMS highlight priorities for research including "the possibility of the recovery of environmental evidence from (for instance) sinkholes" [TR010025-001951, para. 4.4.18], with the Description of Archaeological Resource [possibility of the recovery of environmental evidence from, section 3.3] and Research Themes [TR010025-001951, section 4.2] highlighting the potential for evidence of human use, and the presence of cultural material within utilised natural features such as tree hollows, sinkholes or dolines*.

None of the sections referred to above is part of the Overall WSI (Part 2 of the DAMS), though the ARA is referred to as a guiding document in developing SSWSIs. It is also extremely limited, not reflecting the wide range of issues raised by the SHLP 'discovery.' It pre-supposes that the distinction between such natural features and pits, pond barrows, shafts etc is already clear-cut, rather than needing to be ascertained to ensure that major human features are not missed. It says nothing about research potential beyond the mere human use of a wide variety of natural features of very different character or the complexity of such relationships as described in para 2.9.1 of the HIA Addendum – which is a reasonable statement of an overall research theme, though not a statement of what particular questions it raises:

> *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.*

The more detailed provisions for research in Appendix D are also very deficient, commonly failing to identify such themes even where there are particular densities of pit-like features.

Currently, *the basis of the works to be detailed in SSWSIs* in respect of the overlap between natural sinkholes pits or other hollows and features of anthropogenic origin or use, provides remarkably little commitment to investigate any such features other than tree-throw holes, and then only within areas earmarked for full Archaeological Excavation and Recording (AER).

The Applicant's Overarching Response (paras 5.1.4 and 5.4.3) indicates that decisions on investigating large natural sinkholes or pits, shafts pond barrows etc would be reliant on the responsiveness of the general arrangement in section 8.1 of the DAMS for finalising SSWSIs; the provision for responding to new finds set out in 6.1.24; and the more specific provision of DAMS 6.3.42 for investigating "*isolated features (including natural features that have been shown to contain archaeological remains."*

But the HIA Addendum refers only to the general procedure in 6.1.24, and the ES Addendum makes no reference to any of these provisions.

Both section 8.1 and paragraph 6.1.24 of the DAMS are only concerned with general procedural provisions that apply to the whole mitigation process – they make no commitment whatever to investigate any

particular features or deposits leaving it entirely open as to whether they would be excavated at all. For example, 6.1.24 says:

> *"Where required (for example, for environmental sampling (refer to section 6.3) an iterative site strategy for excavation, artefact recovery and for sampling will be agreed with the TPA, Archaeological Contractor, Wiltshire Council, Historic England and for sites within the WHS, HMAG, at a site consultation meeting (see section 8.1)."*

Paragraph 6.3.42 of the DAMS states (added emphasis) that *"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)."*

The Applicant relies on this as the key specific provision for dealing with large features such as sinkholes or very large pits of the kind identified by Gaffney et al, stating that this "*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."*[17] When coupled with paragraphs 6.4.8, 6.5.14 and 6.6.2 this might seem fairly comprehensive, but it certainly does NOT 'ensure' 100% excavation of such features either within or outside the WHS – the artificiality of the distinction having been re-emphasised in stark terms by the discoveries at Larkhill East and Durrington HQ as reviewed by Gaffney et al. What makes this provision far from certain are the provisos and lack of anything– either in research issues or investigative methods and sampling methods – that is specific to the particular issues raised by large pit-like features that may be of natural or human origin.

- There is no requirement in any of these overarching approaches to investigate all isolated features to establish whether or not they do contain cultural remains – especially with large deep hollows it is likely that there were long periods during the last three millennia when natural processes of infill buried earlier deposits containing cultural material. Relying on superficial indications following stripping of topsoil is thus insufficient.
- There is nothing to indicate what '…. *that have been shown to contain archaeological remains that have been shown'* actually means: is it only those that have been shown to contain cultural material by the evaluation work? Or only those where hand cleaning shows this or only those within some much smaller sample of testing (such as that applied to tree-throw holes (but not other features)?

[17] Paragraph 6.3.42 applies to areas of Archaeological Excavation and Recording, but for areas of 'Strip Map and Record' by virtue of paragraph 6.4.8 *"The same methodologies for mechanical excavation, hand excavation, sampling and recording for AER (see section 6.3 above) will apply to each SMR area, as modified by the relevant SSWSI,"* and for areas of 'Archaeological Monitoring and Recording', 6.5.14 *"The same sampling and recording methodologies for AER will apply to each AMR area (see section 6.3 above),"* as interpreted in the context of 6.5.5 *"The proportion of features excavated will be determined (as part of the iterative process) by the significance of the remains, the ARA and the research aims and objectives set out in the SSWSIs (see paragraph 6.1.24 and section 8.1)"*…. Under 6.6.2 the provisions of section 6.3 would be taken into account for trenching.

- The "*Excavation Sampling Strategy"* (paragraphs 6.3.36 to 6.3.38) together with the provisions for SSWSIs leaves significant scope for varying methods including *"machine assisted excavation"* (paragraph 6.3.36), and for changing sampling levels, which if they are enhanced above the levels indicated is likely to be beneficial, but also allows for unlimited reduction.
- This might seem to be limited by paragraph 6.3.39 to 6.3.51, but paragraph 6.3.42 is subject to the caveat *"unless otherwise agreed…."* Which leaves the position entirely open, far from *'ensuring'* investigation, by allowing agreement not to investigate them at all if it is not immediately apparent that cultural material is present.
- While paragraph 6.3.42 might seem to mean that all isolated natural features with cultural contents would be 100% excavated, this is far from the case, and can readily be interpreted as meaning following the practice at Larkhill East and Durrington HQ of only excavating the levels in which cultural material is plainly evident.
- The target 100% excavation provision of 6.3.42 is also confusing and inconsistent in relation to provisions for sampling other *isolated features (including natural features that have been shown to contain archaeological remains)* such as tree-throw holes (para 6.3.49), which can contain just as significant material, but where far more restricted sampling is envisaged, aimed not at ensuring that the highly rare and unusual is not missed, but that the sample should be 'representative' (whatever that means).

In the light of the nature of the features investigated by SHLP and standard deposits formation scenarios of how large features dug by people naturally erode and infill if not kept cleaned out or recut, it is also not clear what procedure would be adopted to demonstrate conclusively that any large hole in the ground was NOT a pit, pond barrow, pond, shaft or well of anthropogenic origin (such as the parallels discussed in the SHLP paper) which would come within the ambit of para 6.3.47 (for which no defined approach is specified, but special challenges for safe excavation arise). It is also notable that whereas the attendances of the APT Geo-archaeologist and APT Environmental Specialist are required for buried ground surfaces floors hearths (para 6.3.43), no such provision is made under 6.3.42 or 6.3.47.

The provisions are also far from clear in terms of methods of excavation: under the heading "Machine excavation" paragraphs 6.4.6 and 6.5.10 state that *"under no circumstances will the machine be used to cut arbitrary trenches down to natural deposits"* but here again, this is subject to unlimited alteration by the SSWSI process.

Wiltshire's response to the Sec of State consultation 2 is very sceptical as to whether the arcs of massive pit-like features are in any sense a monument, and they are adamant in insisting that the incompletely investigated large pits or sinkholes discovered in the E Larkhill and Durrington excavations were correctly identified as sinkholes, DESPITE some reservations expressed in the archaeological reports about them. This suggests a well-entrenched view, that is not open to other interpretations in the light of different perspectives, such as the apparent spatial association of pit/post alignments and other monuments with the arcs of large pits, which they fail to consider. Given Wiltshire's adamant defence of the excavation

approach at Larkhill E and Durrington HQ, it seems highly likely that the same business-as-usual partial excavation of only upper fills would be employed.[18]

Taken altogether, we are very far from convinced that the vague provisions of paragraph 6.1.24 and section 8.1 are sufficient to secure sufficient excavation of ANY such features, let alone the 100% envisaged for all areas of investigation that might superficially be inferred from paragraph 6.3.42. It is noticeable in particular that the mechanisms to resolve issues where there is disagreement under 8.6 to 8.7 are heavily stacked in favour of the Applicant, even for areas in the WHS or contributing to OUV not allowing any dispute resolution to be raised by advisers and consultees who might well disagree with Wiltshire's decisions if they are as closed to challenge as their response suggests.

3d Residual effects and risks, and policy context - 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 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.*

The combined shortcomings of the proposed ES and HIA Addenda and the absence of any enhancement or clarification of the DAMS, coupled with the continued reliance on the flawed approaches already criticised, reinforce our concerns about the unquantified scale of impacts, their irreversibility and the huge uncertainties inherent in the weakness of the baseline work. This especially applies to the WHS and its setting where archaeological remains contribute to its OUV, and it is alarming that Historic England and Wiltshire Council are so adamant in not seeing any flaws in the approach adopted and their resistance to any more thorough review.

Given their roles in advising on and approving Site-Specific WSIs, sharing the Applicant's view that the DAMS does not need to be clarified and strengthened, as explained above, we have little confidence in the Applicant's bland assurances that the DAMS is sufficient to 'ensure' that all natural features with cultural contents would be fully investigated. When the provisions of the DAMS are examined closely in the context of the criticisms made by the CBA and others, the very substantial and unresolved uncertainties and limitations inherent in the scope of baseline studies become apparent.

We are especially concerned at the failure to complete the Archaeological Evaluation Strategy and the failure to analyse results in a manner by which the quantitative scale of *isolated features (including natural features that* [could] *contain archaeological remains)* could be calculated or estimated. It is totally unclear what would be required to demonstrate reliably whether or not all such isolated features do or do not contain archaeological remains, let alone how the larger ones would be investigated. The research questions in respect of such features are insufficiently clearly formulated to guide properly what methods and sampling rates would be needed to address the specific issues and uncertainties which Gaffney et al's paper reveals.

[18] Potentially curtailing excavation to avoid health and safety constraints, rather than going to the expense trouble and time of creating a safe working environment to ensure complete investigation.

This reinforces our previously expressed concerns [**REP2-070**; **REP2a-005**] including how this relates to areas of major compounds and other active working areas where we have repeatedly highlighted how the proposed measures for preservation *in situ* fly in the face of established soil handling standards [**REP2-070** paras 44-47; **REP2a-005** paras 3, 10, 71 and 75; **REP3-049** Question CH.1.9; **REP6-084** p 5-6 para CH.2.5; p 27 para CH.2.9iii; pp 36-40, para CH.2.9xv; p46 para Fg.2.37; pp 82-83 para WM2.4; pp 83-85 paras WM.2.8. WM.2.10 **REP8-036** pp 7-8 and 1-13] This provision, which as far as we know is unique (the Applicant has not demonstrated that it has a tired and tested track record of success) is of highly questionable efficacy, let alone the still entirely unresolved conflict of seeking to meet diametrically incompatible and far more well-established soil handling standards. We believe this to be undeliverable and that unlike soils, the alternative archaeological mitigation approach would be excavation – but in an area where, contrary to the Archaeological Evaluation Strategy, no evaluation was carried out and very substantial uncertainties remain concerning the totality of "*isolated features (including natural features that* [could] *contain archaeological remains)*".

With regard to **regulatory requirements** we believe the ES falls short of meeting requirements relating to forecasting baseline conditions and reporting limitations and uncertainties. In particular, the failure to implement fully the Archaeological Evaluation Strategy – as revealed by a document that was not presented to the Examination, nor reported as a limitation in the ES – is a major omission. The shortcomings that arise from this were repeatedly documented as a concern by the CBA throughout the Examination [**REP2-070** paras 44-47; **REP2a-005** paras 3, 10, 71 and 75; **REP3-049** Question CH.1.9; **REP6-084** p 5-6 para CH.2.5; p 27 para CH.2.9iii; pp 36-40, para CH.2.9xv; p46 para Fg.2.37; pp 82-83 para WM2.4; pp 83-85 paras WM.2.8. WM.2.10 **REP8-036** pp 7-8 and 1-13]. But the Applicant made no reference to the commitments to evaluate areas affected by compound and landscaping made in the February 2018 Strategy; provided no explanation of why they were not carried out; and offered no indication of whether Wiltshire Council and Historic England acquiesced in this – if they did? (This is not clear from their Statements of Common Ground **AS-147** and **AS-136**) or if the advice of the Scientific Committee was sought (there is no mention of this in their minutes **REP9-028**).

In the absence of far greater certainty about the scale and extent of impacts, including for example whether the preservation proposals for compounds etc are viable (see below), the Applicant's assurances about all the archaeology being completed within the Preliminary Works stage DAMS para 1.2.1; section 9; Appendix A9) is little more than a guess – see CBA written statement and submission to Examining Authority's 2nd round of questions [**REP6-084** pp 28-30] for detailed comments.

With regard to **government international obligations** and **national policy** context, other responses notably, ICOMOS UK and Stonehenge Alliance, reflecting and reinforcing evidence to the Examination, have cogently outlined the Policy weight that applies and the Secretary of State's duties on behalf of the UK Government under the WHS Convention and the policy weight to be given to avoiding and minimising harm to the WHS and its setting which includes archaeological assets that contribute to is Outstanding Universal Value.

We have previously explained this [**REP2-075**] as have ICOMOS UK and others. Most recently and in this context the position was summarised by Victoria Hutton as part of the Consortium of Archaeologists' original concerns [**CoA SofSt 2**], with which we concur. In the light of the responses to the Secretary of State's second consultation, and our further detailed analysis presented here, we believe that these considerations are even more pertinent in showing why the harm to the WHS and its OUV have been badly underestimated, why the ES and HIA are seriously flawed and the DAMS does not secure a cast iron archaeological response to fully investigate affected assets.

ISSUE 4 OTHER MATTERS RAISED IN THE …. REPRESENTATIONS RELATING TO THE ARCHAEOLOGICAL FIND AT THE WORLD HERITAGE SITE…

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

With reference to the Judicial Review into whether the RIS should be subject to SEA Wiltshire Council [**WILTS SofS 2** p 10] states that

> *The Council is of the opinion that the case, per se, is not relevant to the principle of the scheme for which the DCO application has been made and should not therefore be given weight by the Secretary of State in his further deliberations.*

This totally fails to appreciate that the main purpose of SEA is to help ensure that the best overall environmental choices are made across programmes of large-scale development so that their major effects are as far as reasonably possible prevented, avoided, reduced or offset. Wiltshire present no evidence looking beyond their own geographical remit to support their assertion that SEA of the RIS2 is not relevant.

The CBA has already set out why it is fundamentally important – especially in the case where over £1.7bn is allocated to achieve even in the Applicant's estimation only a modest net benefit for the WHS; a far cheaper alternative route avoiding the WHS is available; and a far lower standard of major structural mitigation (green bridges and tunnels) is being afforded other schemes in nationally protected landscapes where alternative routes to avoid them are not available [**REP2-070**].[19]

(iii) Comments on DCO Drafting - Articles 22 and 50

Article 22: We note the altered and extended powers provided for – especially for example a power to reconstruct elements of the scheme, including structures – and it seems clear that some of these could affect archaeological assets, potentially to a substantial degree, but there is no indication that any assessment has been made of the possible impacts, nor what mechanisms would be available to address this. Apart from exacerbated disturbance and potential to affect previously unidentified assets, in some instances this could alter provisions for preservation *in situ*.

While such changes may have to be below the threshold of 'significant effects', it is not clear how this would be assessed. This is an especially important consideration given

- the WHS status of a significant part of the scheme
- the significance of archaeological assets within the setting of the WHS and contributing to its OUV
- the close proximity of the scheme and inclusion within the Redline Boundary of numerous scheduled monuments and other assets of national importance
- the clear potential for as yet unrecognised assets.

[19] We believe that Highways England's attempted rebuttal of our arguments is fundamentally flawed, but much of this will now be for the Court to determine.

It should be made much clearer that any works covered by these provisions would be subject to archaeological assessment and suitable mitigation, and this should be explicit in the explanatory memorandum.