

**Highways England: A303 Amesbury to Berwick
Down Project, Development Consent Order
Application**

Scheme Reference: TR010025

**Summary of oral submissions at ISH 8:
Cultural heritage, landscape and visual effects
and design**

for

**The Stonehenge Alliance
(Reference No. 2001870)**

by

Dr. Kate Fielden and Dr George Reeves

ISH 8 summary of oral submissions made on behalf of the Stonehenge Alliance

Note. The following summaries are listed according to the Agenda items and in the order the items were taken at the hearing.

3. The World Heritage Site

3.1. *Harm to the OUV*

i. Harm to the OUV and its place in the overall acceptability of the proposed development.

The Stonehenge Alliance agreed with the statement by Ms Hutton re the NPS and the World Heritage Convention and the UK's international obligations.

We underlined that the “balancing” exercise of adverse and beneficial effects advised by ICOMOS in their HIA guidance is only to be undertaken when adverse effects need to be balanced against the public good. This exercise has not been undertaken by the applicant in its HIA which simply balances positive and adverse effects on attributes of OUV to reach an overall conclusion.

3.2. World Heritage Convention adopted decision and report, July 2019

i. Whether the proposal is an improvement rather than the best available outcome for the property.

The Alliance pointed out that WH Committee's decisions *are* determinative: after all, among other decisions, it can remove WHSs from the WH List. The Report and Decision of the Committee may be interpreted as containing a warning to the British Government that the Stonehenge, Avebury and Associated Sites WHS could be removed from the WH List should the A303 Scheme go ahead. Although Highways England pointed out that there is nothing in the Committee's decision or report to threaten removal of the WHS from the List, we take the view that such an explicit threat is not required: the decision and report themselves are a warning that the scheme **would** damage the WHS and that the WH Committee would be considering possible consequences.

Contrary to the assertion of Highways England, the obligation under the WH Convention is to preserve and protect the *WHS*, not specifically its OUV; but in protecting the WHS the OUV would also be protected.

ii. A Longer tunnel is technically feasible but not proceeding because of cost, etc.

We referred to this issue in our Written Representation on Alternatives (REP2-134). It was obvious from the start that cost was the guiding factor in terms of how long the tunnel could be (see REP2-134, para.1.2); this appeared not to have been disputed by anyone at the time, whatever is said now. Keith Nichol, for DDCMS, indicated at the hearing that cost and Value for Money are indeed key factors in the case.

[Estimated tunnel costs given at the A303/A30/A358 Corridor Feasibility Study Reference Group meeting on 5.11.14 were £1,315bn max. for a 2.9km tunnel and £1,775bn max. for a 4.5km tunnel. Costs have risen considerably since then, as referred to in the Transport Select Committee Report on Transport Infrastructure in the South West (July 2019).]

3.3. Heritage (Impact Assessment (HIA))

i. HIA approach to effects of proposed development on spatial relationship attributes of OUV
The Alliance agrees with Susan Denyer (for ICOMOS-UK) on this matter: insufficient emphasis has been given to impacts on the WHS landscape as a whole. The WHS itself, which is a heritage asset of the highest significance, has not been assessed in respect of the damage the scheme would have on it. Nowhere is there an account of the different impacts of the various elements of the scheme on the WHS in its entirety. This should have been an essential and integral part of the HIA.

4. The OEMP (Deadline 6 version [REP6-011 and REP6-012])

4.1. Approvals/agreement/consultation

i. If the Secretary of State is to decide on vibration control measures and ground movement monitoring, presumably he/she would also need to be satisfied with the methods for protection of archaeology should problems arise with vibration and subsidence. We have not seen a full description of what would be done, just some suggestions: who will decide what should be done if these problems arise?

ii. Proposed bodies/persons to approve documents

The implications of the Secretary of State making final decisions on certain documents are that the Alliance and other IPs may not see them before they are submitted to him/her. Will it be possible for us to see them before the end of the Examination in order to comment on them should we wish to – whether or not the DCO is granted – notably those in which we have already had some consultative involvement?

4.3. Miscellaneous

iv. Ground Movement Monitoring Strategy

a) Through the OEMP?

We pointed out that there is a tendency to assume the ground rock is fairly uniform throughout the Scheme but this is not the case. There are vertical and horizontal fissures, there could be voids; there are areas where groundwater travels through the rock more rapidly; so that vibration and settlement could happen quite low down below ground and have an effect higher up. Consider a vertical fissure or sink hole with archaeological deposits within it, such as the

Wilsford Shaft: who knows what kind of effect there would be on such a feature if settlement occurs? We don't know how this could be dealt with because we don't know enough about the characteristics of the surrounding material: a WHS that is so important for its archaeology is hardly the right place to start finding out about measures to monitor for and protect against vibration and settlement affecting archaeological remains. Protective measures so far proposed by Highways England are reactive not proactive. How would the Secretary of State be advised as to how to monitor and remediate?

If there is a serious collapse, to the surface, a hole could be formed in the WHS surface, possibly leading to very serious archaeological damage. It's not enough simply to fill such a hole with grout (this would have to be from the surface and possibly in enormous quantities). That wouldn't necessarily be the end of it: tunnelling would continue in unstable ground with potential for further damage.

[In addition to the Wilsford Shaft, many other sink holes (natural solution hollows) have been identified in the WHS. The largest, in Normanton Gorse, is some 30m across and filled (from an unknown depth) with rubble from the old Stonehenge Aerodrome; it is located not far from the proposed W tunnel portal. (See: Boden, M., D. Field and S. Soutar, *Stonehenge WHS landscape Project: The Lake Barrows, The Diamond and Normanton Gorse*. (Historic England Research Report Series 29-2012), pp.23–4. <https://services.historicengland.org.uk/rrstonehenge/> (scroll down to no.36)

Ms Ayliffe, for Highways England, pointed out that there is particular concern where the TBM breaks out of the ground. The W portal area is enormously sensitive archaeologically with known (and probably unidentified) burials as well as sink holes which may have had a ritual or other use in the past.

For more information on the sink holes in the WHS, see: Bowden, M., S. Soutar, D. Field, M. Barber, *Analysing the Stonehenge World Heritage Site*, Historic England 2015, p.41. (Not accessible online.) The publication refers to:

“ . . . numerous hollows, apparently of natural formation, in the landscape around Stonehenge. The smallest are less than 10m across and about 2m deep, the largest up to 30m across and up to 2m deep. There are several on the flanks of Stonehenge Bottom immediately to the northeast of the monument, at least one on King Barrow Ridge and a particularly large one on the northern edge of Normanton Gorse close to the ‘Sun’ Barrow (Amesbury 15).’ and

“ . . . the ritual significance of deep holes in the chalk, whether natural or entirely artificial is undoubted.”]

4.4. Design

ii. Highway boundary fencing

We commented that fencing, if only 1.2m high, would be easy to climb over and neither safe nor secure.

iv. Design Principles

If the scheme is agreed, certain parameters will be set within which the design has to work. However, at the present stage, some of the aims appear to be impossible to achieve, e.g.:

P-PW S01 (“Tunnel portals, retaining walls and other structures”): “design to be sympathetic to the surrounding landscape”; and

P-PW S04 “The tunnel to be designed to enhance the user experience and become a new point of reference when travelling along the A303.”

Where will signs be placed to show travellers they are entering a WHS? if the WHS is entered through an underpass or a cutting and a tunnel, what kind of experience of the WHS landscape will people have? This is a serious issue if the scheme goes ahead. The Alliance would not propose an above-ground route for the improved A303 as an alternative. The experience of the WHS landscape from the existing road is widely acknowledged to be important to a great many people who are unable to stop on their journey. At present they know they are passing through a special landscape. With the scheme in place they would have little idea of the WHS they were travelling through. To suggest that it would be possible to design the scheme so that it would fit into the landscape and that going through the tunnel would somehow replace the present amazing experience of anticipation of seeing the henge (which would be completely lost to future generations), is bizarre.

v. Key design elements [REP7-024. Annex 4 to OEMP]

We propose to expand our response to photomontages here, to include those produced for Deadline 7 and discussed at ISH8, so that our comments on the subject are together in one place.

The **views produced at Deadline 7** do not alter our opinions previously given. We note, for example, that the view north-west from Vespasian’s Camp (Fig.7.106) has been taken with trees in leaf (the trees may not always be there and more of the Scheme would show in winter); similarly, the view north from Blick Mead (Fig.7.107).

In respect of **additional photomontages produced after (i.e. late at) Deadline 7**, we note that these still do not include crucial views we have asked for which are:

- i. moving views for walkers along the “proposed A303 byway”;
- ii. dynamic view from the top (south end) of the Winterbourne Stoke Long Barrow over the road cutting and towards the new junction; and
- iii. dynamic view from the ancient Avenue over the E tunnel portal and the expressway approaching it from Amesbury.

Highway England's dynamic view 3 (Fig. 7.97), dynamic view 4 (Fig. 7.98) and dynamic view 6 (Fig. 7.100) are taken with Green Bridge 4 in the foreground obscuring sight of the western cutting. Since people move within the landscape, there seems little point in supplying views from locations which best disguise the impact of the Scheme.

Views Fig 7.102 and 7.101 (for which we had asked) amply serve to illustrate the incongruity of the massive highway cutting within the WHS landscape;

Dynamic view 6 (Fig. 7.99) is taken from a viewpoint that would not be much used by the public and is again produced to show the Scheme to best advantage.

Photomontage "PROW on the line of the old A303" produced in **Annex 4 of the OEMP** is again misleading, owing to its having been taken from a viewpoint which hides the new road, presumably with Green Bridge 4 in the foreground. The view should have been taken from the embankment of the present A303, visible in photomontage "Tunnel west portal approach" (also in Annex 4 of the OEMP) which would overlook the new cutting and tunnel portal. The map/plan ZTV for this area (REP7-025, 'Western Cutting' ZTV, Fig..4) indicates that you wouldn't see the cutting from the byway: inexplicably, the ZTV of the proposed A303 in REP7-025 is of the *road surface* and not the cutting and tunnel portal!

Again, it would have been helpful to have had a moving image, over this western cutting section from Stonehenge to the present Winterbourne Stoke roundabout and vice versa, from the height of a walker along the proposed A303 byway.

8. Blick Mead Hydrology

If monitoring (and any associated remediation) is required for groundwater levels at Blick Mead during construction and operation, how should this be secured?

a) Through the OEMP?

George Reeves, for the Alliance, said that he could explain why there are springs at Amesbury Abbey and Blick Mead. He has visited the site and spent a considerable amount of time studying the borehole records, borehole logs, the geophysical logs, and the groundwater data such as it is, going west from the Blick Mead/Amesbury Abbey springs. The spring line lies on and arises from the Whitway Rock formation and that is highly relevant the whole way west through all the borehole records from which, if you look at them carefully, you can see the evidence. A zone of elevated permeability is lying above the equivalent horizon to what is called the Whitway Rock/Barrois sponge bed and the Stockbridge Horizon. The Whitway Rock affects the whole tunnel route largely below the horizons which will be excavated but will have a profound effect, in Dr Reeves' opinion, on the groundwater system through the proposed tunnel route. [Please see summary of Dr Reeves' presentation on 29th August and supporting information at ISH10, as submitted at Deadline 8.]

b) *Through an additional requirement?*

The Alliance agrees with what George Lambrick has said regarding the need for a multidisciplinary team for [bespoke] monitoring at Blick Mead. It seems a little precipitate to proceed when it appears there is not yet full knowledge of the ground rock/groundwater situation. As Dr Reeves has briefly pointed out, there are very strong implications re building of the tunnel within this particular unique ground rock that will have a bearing on what Highways England and Wiltshire Council are now being asked to consider.

6. Landscape and visual

6.2. *Visual*

The Alliance would like to see:

- a moving image along A303 byway (pedestrian);
- a panoramic view across the cutting from the top of the S end of Winterbourne Stoke Longbarrow ('Normanton Down' was said by mistake); and
- a panoramic image from the top of the E portal roughly where the Avenue crosses it which may be a publicly accessible location in future.

We have made these requests a number of times and they are reiterated in our comments in response to Highways England's REP7-021.

We endorse Dr Shell's repeated request for a digital terrain model showing the Scheme as proposed to be published (Highways England has admitted one does exist) which would allow better appreciation of the impacts of the scheme as one travels through the landscape.