

**From:** [REDACTED]  
**To:** [Richard Price](#)  
**Cc:** [A303 Stonehenge](#)  
**Subject:** Stonehenge Alliance. Summaries of oral submissions made at Issue Specific Hearings  
**Date:** 21 June 2019 21:17:04  
**Attachments:** [REDACTED]

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Dear Richard,

I attach the following documents comprising summaries of oral submissions made for the Stonehenge Alliance at the following Issue Specific Hearings:

ISH2 on Cultural heritage including hydrological implications for Blick Mead  
ISH3 on Landscape and visual effects and design  
ISH4 on flood risk, groundwater protection, geology, land contamination, waste and materials management. **Please note:** submission from Dr George Reeves still to be submitted.  
ISH5 on Noise and vibration, health and wellbeing (including tranquillity). **Please note:** submissions from Clive Bentley and Dr George Reeves still to be submitted  
ISH6 on Traffic and transportation  
ISH7 on Biodiversity, biological environment and ecology.

Please note that summaries of oral representations of Dr George Reeves (Flood risk etc) and Clive Bentley (Tranquillity) are still to be submitted as explained in earlier emails and on the telephone – and for which we again apologise. I hope to be able to forward George Reeves' summaries on Monday 23 June or shortly thereafter. Clive Bentley's summary will not reach you until some time in July as he is abroad.

With all good wishes –

Kate

For Stonehenge Alliance

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

**Scheme Reference: TR010025**

**Summary of Oral Representations made at Issue  
Specific Hearing 2 on 5–6 June 2019: Cultural heritage  
including hydrogeological implications for Blick Mead**

**for**

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

**by**

**Dr. Kate Fielden**

## **Issue Specific Hearing 2 on 5 and 6 June 2019 on Cultural heritage including hydrological implications for Blick Mead**

### **Summary of oral submissions for Stonehenge Alliance in agenda order**

by Dr Kate Fielden

#### **Item 3. Policy and guidance**

##### *vi. The balancing of impacts on a WHS*

It was pointed out that in the case of the Tulip development, the harm would be to the setting of the WHS, not its fabric [i.e., unlike the A303 Scheme in respect of the Stonehenge WHS].

There appeared to be confusion between Highways England's acceptance that ICOMOS HIA Guidance should be used for HIA (which guidance says, in respect of a WHS, that the balance of benefits against harm can only be weighed in favour of the public good/benefit); and the stance of Historic England and Wiltshire Council [I said DDCMS by mistake] who argue that planning policy allows one to look at all considerations to obtain an overall balance of impacts in a development.

Historic England argued that each case must be taken on its merits but following discussion of this issue at the ISH, we wish to point out that NPPF policy (paras. 195 and 196) is that substantial and less than substantial damage to designated heritage assets may be weighed against the public good, while para.197 indicates that it is that only in the case of non-designated heritage assets, that "*In weighing applications that directly or indirectly affect [them] a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset.*"

#### **Item 6. Effect of elements of the scheme on cultural heritage assets and their settings**

##### *ii. Winterbourne Stoke Longbarrow junction*

There are concerns about the impacts of lighting: there are no projected images of the new Longbarrow junction where traffic lights are planned: will there be glow from these lights and car lights on rising slip roads? This question was not given a satisfactory answer.

There is no projected view of the Works Compound – though image REP3-030 - Figure 7.73 Viewpoint 13 taken from the Winterbourne Stoke barrow group shows it would cover an extensive area and the Slurry Treatment Plant would rise well above the trees. These features would be even more visually prominent closer to, including from the A360 (route to the visitor-centre).

##### *iv. Western portal*

SA expressed concerns about the possibility that ground stabilisers and/or other engineering would be needed to deal with any ground instability/vibration: what impact would these [potentially substantial features] have on the archaeology and visual appearance of the portals?

#### **Item 7: The DAMS and associated documents**

##### *Sampling of topsoil etc prior to works*

SA is concerned about artefacts etc. not sampled from topsoil – much the larger part of the remaining archaeological material therein. If this is redeposited back over landscaping works at the end of the scheme, it would cause confusion in the archaeological record in years to come. Similarly, there could be finds in chalk below the topsoil, e.g., from pits and fissures: redeposition for haul roads, etc.

could relocate WHS artefactual material out of context. If ideal/best procedure is followed (100% sampling) then perhaps redepositing topsoil nearby would be acceptable; if not, then what will be done with this material? There are cost implications.

*Impacts of vibration/settlement on archaeological deposits*

Highways England says measures will be put in place to monitor the TBM for vibrations impacting on (known) archaeology. What about unknown features, such as burials etc. that could be affected? There is a conspicuous absence of any convincing measure proposed to deal with damage should it occur: grouting from the tunnel is suggested but what if that doesn't work?

Highways England claims no damage will occur: why then put monitoring facilities in place?

**Item 8: Blick Mead**

*Effects on waterlogged archaeology*

Although SA was advised to raise this at another time, a suitable opportunity has not arisen. It should be pointed out that waterlogged deposits were found in the lower half of the Wilsford Shaft. There could be similar waterlogged deposits [in fissures], other than at Blick Mead which might be impacted as a result of lowering of the head of the water table by the tunnel.

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

**Scheme Reference: TR010025**

**Summary of Oral Representations made at  
Issue Specific Hearing 3 on 7 June 2017:  
Landscape and visual effects and design**

**for**

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

**By**

**Dr. Kate Fielden**

## Issue Specific Hearing 3 on 7 June 2019: Landscape and visual effects and design

### Stonehenge Alliance written summary of oral submissions in agenda order

by Kate Fielden

#### **3. Policy and guidance**

##### *i. ICOMOS/UNESCO*

The anomaly of Highways England's separation of HIA from LVIA was highlighted in the SA's Written Representation on Landscape and visual aspects of the LVIA by Andy Norfolk (REP2-137).

#### **4. Assessment methodologies**

##### *v. range of photomontages and choice of receptors*

Highway England's "Disappearing road" video used in consultations was noted, in which the scar of the present A303 was (unrealistically) completely omitted over the tunnel area.

We would like to see a video of the pedestrian route along the new A303 byway with views across the western cutting.

Other critical views might be seen at some time in future by walkers, e.g., the view from the ancient Avenue over the E tunnel portals with the Expressway coming up towards the viewer in the cutting below Vespasian's Camp. (The view supplied in the DCO application is some distance from this location and does not show the new cutting to the east portal.)

#### **5. Effects on landscape character**

##### *i. Effects on overall spatial character of WHS*

The archaeological impact of 20thC and 21stC roads on the WHS landscape is massive. The impact of the grassed-over A344, for example, is strong in the view from King Barrow Ridge. The imprint of the redundant A303 (proposed byway) will also be enormous on the landscape. And there will be yet another linear feature right across the WHS from the new road if it goes ahead – larger than the others. Even if eventually filled in and grassed over the archaeological impact will still be visible. The tunnel in operation may also be visible in dry weather [as a 'crop mark' from the air], certainly at each end.

In respect of the possibly of wider movement through the landscape in future, Dr Shell referred to the work of an Australian archaeologist indicating that the monuments themselves were used as mnemonics by past illiterate communities in order to maintain their oral tradition of understanding of landscape and spatial relationships. The (published) work is by Lynne Kelly, *The Memory Code: Unlocking the Secrets of the Lives of the Ancients and the Power of the Human Mind*, published in 2017 by Atlantic Books, London.

#### **6. visual effects**

##### *i. Overall during construction and operation*

There are concerns about views of the landscape from the A303 during construction: there will be hoardings to hide the cuttings and lights in the winter months (early evening).

##### *ii. Effects on particular visual receptors*

When the scheme is in operation, visitors to the WHS will no longer be able to experience the [anticipatory] feeling of rising up to something special: they will drive through cuttings or a tunnel. The approach to the WHS will no longer be anything like the experience it is now.

## **8. Design**

### *i. Need for an overall vision*

We do have an overall vision – in the Management Plan for the WHS – that is not compatible with what is being proposed. The Government's Scheme overrides the agreed vision and safeguards in the Management Plan.

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

**Scheme Reference: TR010025**

**Summary of Oral Representations made at Issue  
Specific Hearing 4 on 11 June 2019: flood risk,  
groundwater protection, geology, land contamination,  
waste and materials management**

**for**

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

**By**

**Dr. Kate Fielden**

**Please note: oral submissions by Dr Reeves still to be submitted**

## Issue Specific Hearing 4 on 11 June 2019 on Geology, Ground conditions and groundwater flows etc.

### Stonehenge Alliance summary of oral submissions in agenda order

by Kate Fielden

#### 5.2. vii. *monitoring and remediation*

If monitoring of the TBM is to be undertaken, there must be a concern that damage from vibration/ground instability is possible. We need to know what precise measures will be employed to *avoid* damage to archaeological remains from vibration and how it would be dealt with if it occurred – e.g., as a result of collapse of a void. Also, what measures exactly will be required, if necessary, to stabilize the portals and cutting walls?

[**Post hearing note.** References made at the hearing by Mr Taylor to the OEMP do not answer the above questions. Appendix 10.6 (APP-278), Section 5 (“Potential sources of ground movement”) and Section 6 (“Assessment of land instability”) to which Mr Taylor also referred us, give rise to very considerable concern, since Highways England there admits to potentially serious unknowns. There can be no confidence in reserving such matters as *protection* (as opposed to “mitigation” which can include loss) of known and unknown archaeology along the line of the tunnel for the contractor to decide. These issues should be addressed as a part of the DCO, so that there is *certainty* that no further damage is done to the archaeology of the WHS once construction begins. Admission that unexpected conditions may occur during tunnelling indicates that Highways England does not yet have full understanding of the ground conditions. APP-278, para. 6.1.2, reads:

*“Dissolution features have been identified regionally and several features have been identified during preliminary excavations within the footprint of the Proposed Route. The features within the footprint of the proposed route are within proposed cuttings, so will not have any impact on construction. Small scale features have also been identified in interpretative reports; however, the evidence is deemed to be limited and inconclusive.”* (our emphasis)

The fact that dissolution features [including, we understand, at least one incompletely excavated fissure] appeared in trenches in the proposed cutting area, does not mean that they would not also exist in the area of the tunnel or in cutting sides.]

#### 6.5. *Road drainage strategy*

There is potential for a catastrophic toxic event/accident impacting on Blick Mead environmental deposits. There will be more traffic on the A303 than at present. Runoff catchment is currently not good (via culvert-draining into the Avon) but there is no proposal to improve it. There will also be more runoff from the flyover as Andy Rhind-Tutt pointed out. The present drainage situation existed before Blick Mead was known about. One would hope there would be improvements with a scheme like this. There are implications for contamination of the Avon SAC and the Statement to inform the AA. The decision will be for the SoS who needs certainty that there will be no adverse effect.

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

**Scheme Reference: TR010025**

**Summary of Oral Representations made at Issue  
Specific Hearing 5: Noise and vibration, health and  
wellbeing (including tranquillity)**

**for**

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

**by**

**Dr. Kate Fielden**

**Please note: oral submissions from Clive Bentley and Dr George  
Reeves still to be submitted**

## **Issue Specific Hearing 5 on 12 June 2019 on Noise and Vibration, health and well-being (including tranquillity)**

### **Stonehenge Alliance summary of oral submissions in agenda order**

by Kate Fielden

#### **4. ES Ch.9.**

##### *4.ii. Effect of topography*

Noise impact depends on where you are: underneath viaduct/flyover might be less noisy than at some distance from it.

##### *iv. Assessment of tranquillity within the WHS*

The WHS Management Plan has no policy (*cf.* Aim 6) to remove the A303 from the WHS, just to reduce its impact.

#### **5. Noise impacts**

##### *5ii. River Till crossing*

Highways England argued that there would be no noise impact on designated areas but SA disagreed in respect of the NNR/SSI at Parsonage Down, notably from the observation hut (at Cherry Lodge), with wind from the SW. Discussion outside the hearing did not convince us otherwise.

#### **6. vibration impacts**

##### *6.iii. archaeology, ancient monuments, cultural assets*

In response to what was said by Mr McNab for Highways England: we submit that the archaeological sampling work undertaken was not 100%; the Stonehenge Hidden Landscapes Project still has an enormous amount to do in analysing findings; there may well be more burials along the route not spotted by geophysical work; and although SAMs may be degraded where the tunnel passes beneath them, it doesn't mean at all that there would be no more useful information to be obtained from them. We need to bear in mind that the evidence in this landscape is largely very fragile and much of it is in the topsoil and just below. By no means do we know the full archaeological record along the line of the tunnel.

Highways England says it is unaware of any study that looks at damage to archaeological remains (from tunnel boring). The geology at Stonehenge is unique. We don't know exactly what might be encountered because we don't have a 3D model; we do know there are fissures. If there is any kind of settlement – even a small amount as suggested at the Hearing [but note that APP-278, para.6.4.3 estimates 2–3cm], that could break bone material, pottery, even within a consolidated matrix. The remedial proposals set out in the response to Mr Thornely-Taylor's evidence suggests that mostly it's monitoring and we don't know exactly what the monitoring equipment would look like and whether it would penetrate the ground. Should there be any problem, the remedial action appears to range from simply slowing down the TBM to stabilise the ground or instigating ground stabilising measures by introducing grouting. Where will you grout from if, say, there is some damage to the long barrow? This is an incredibly sensitive archaeological landscape: we shouldn't be running any risks at all. The precautionary principle should be used and full explanation given where there are so many unknowns that need to be dealt with.

## **7. Effects on wellbeing**

### *iii. Access to WHS*

Irrespective of proposed byway closure, the scheme denies access to sight of Stonehenge from the A303 currently enjoyed by many for free. So they would have to walk, if they can, unless they pay via the visitor-centre. One would have hoped that, at the very least, car parking would have been provided [as a part of the scheme]. Driving along the byways isn't always easy, especially from Druid's Lodge. There is potential for closure of Byway 12 to traffic at Larkhill from time to time by the MoD for emergency reasons.

At the Preliminary Hearing, there was a request to see the "English Heritage Phase 1 Visitor Survey" which is, in fact, a survey undertaken by the NT that looks at people's value of the view of the Stones from the A303. Although the NT does not wish to place it into the Examination, its findings are referred to by Highways England in the HIA [to support its case for the scheme]: we ought to be able to see at least that part of the survey mentioned in the HIA: assumptions have been made from it that c.75% of people aren't too worried about loss of the view from the A303 which seems unlikely. If we can't see the survey, will the ExA dismiss that part of the survey/HIA from their considerations?

Following the Hearing, study of the section of the HIA which includes this survey (APP-195, pp.500–502) indicates that contrary to the assertion of the NT, not all of the survey information has been published in the HIA: we do not know fundamental and critical facts about it, e.g., how many people were interviewed or how, nor where and who they were.

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

**Scheme Reference: TR010025**

**Summary of Oral Representations made at Issue  
Specific Hearing 6: Traffic and Transportation**

**for**

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

**By**

**Dr. Simon Temple**

**Professor Phil Goodwin**

**Chris Todd**

## **Introduction**

1. This note summarises the principal points made on behalf of The Stonehenge Alliance at Issue Specific Hearing 6: Traffic and Transportation, held at City Hall, Salisbury on Thursday 13<sup>th</sup> June 2019. Where necessary, we have added some amplification and clarification of our position. In the interests of clarity, the evidence is presented in the order set out on the Agenda, which does not entirely match the order in which items were discussed at the Hearing.

### **Agenda Item 3.1: Reliability and Validation of the Local Traffic Model**

2. The traffic modelling has been undertaken using a version of the South West Regional Traffic Model, which has been refined in the vicinity of the project. Stonehenge Alliance is concerned that the A303 Stonehenge project is located towards the eastern end of the area in which traffic flows are simulated in detail. In particular, the M3 north of Basingstoke and the competing M4 east of Reading are outside the simulation area. On roads outside the simulation area, the model assumes that journey times are fixed (in a particular forecasting year) and do not vary as traffic flows change. This means that the model cannot adequately assess switching between the A303 and M4 corridors for trips between the London area and the South West, as traffic volumes change. This is significant because there is a high proportion of long distance traffic on the A303 near Stonehenge (53% of traffic has an origin or destination at least 30 miles to the east of the project route section), and high levels of congestion are forecast on the M3 by 2040. This may mean that, in reality, congestion will cause traffic to use other routes so the forecast flows do not occur. The model is not capable of simulating this.
3. We note that the DIADEM Variable Demand Modelling software has been used to assess some of the impacts of the project on travel behaviour. The Examining Authority and Interested Parties have not been provided with the Calibration and Validation Reports for the model, so we cannot be confident that it is appropriate for this project, despite some very limited validation checks being supplied by Highways England. We note that Mr Hanson, for Highways England, stated at the Hearing that the model was validated at a national, not local, level and this further increases our concerns on this issue. We consider that the Calibration and Validation Reports should be provided to the Examining Authority and Interested Parties, so they are available for scrutiny.

### **Agenda Item 3.2: Reliability of the Traffic Forecasts**

4. The traffic forecasts made consist of a core 'most likely' trajectory with a narrow fan of alternative forecasts as a sensitivity test. The 'most likely' figure is actually significantly higher than has been observed in recent years. The Department for Transport National Traffic Forecasts had adopted the same approach until 2013, but following a long history of overestimates changed the format in 2015: since then there has been no 'most likely' forecast but a number of different scenarios, with a very wide range between the lowest (very little traffic growth) and the highest (full scale, low cost, electrification). Last year Patricia Hayes, DfT Director of Roads, said that the same would be applied to specific schemes as well: 'more emphasis will be given to appraising schemes against different scenario tests, reflecting the

DfT's move to scenario forecasts for road traffic' (*Local Transport Today*, 17.12.2018). This has not been done, possibly because it is not (yet) strictly required in WebTAG, though it is clearly the official intention. Not to do so will tend to overestimate the estimated benefit against a low traffic growth future, or overestimate the speeds in a high traffic growth future. In both cases the forecasts actually used in the appraisal will be unreliable.

### **Agenda Item 3.3: Frequency of Busy Days**

5. In our initial Written Representation, Stonehenge Alliance reviewed the evidence on traffic congestion on the A303 near Stonehenge and demonstrated that this was primarily a summer weekend issue. Highways England have now presented further evidence on the number of busy days when there is congestion. We consider that this is highly misleading. Highways England takes the day of the year when traffic movements are fastest and then measures the amount of additional time on all other days. The journey time on the fastest day equates to an average speed of about 95km/h. Given this includes negotiating the Countess and Longbarrow roundabouts and passing through Winterbourne Stoke, this reflects almost free flow conditions throughout the day, with very little freight traffic. It is therefore a very atypical day. Some impact from the volume and composition of traffic can be expected on almost all sections of the Strategic Road Network, and other main roads, on a typical day and is not evidence of the need to increase capacity. By using the fastest day as the basis for comparison, Highways England is exaggerating the extent of congestion on the route.

### **Agenda Item 7.1: Route F010 – through Upper Woodford Valley**

6. While the Stonehenge Alliance does not support Route F010, we consider that it was dismissed too quickly and should have been presented as an option in the public consultation. We disagree with Highways England's assertion that it would result in more rat running through the villages to the north of the existing A303. This is not supported by Highways England's modelling which shows reduced use of the relevant roads on a normal day. As Option F010 moves the A303 further away from the villages, it is less likely that there would be rat running through the villages if the A303 is blocked, than with the proposed alignment.

### **Agenda Item 8: Economic and Benefit to Cost Ratio**

7. The overall economic case for the project is very weak with only £1.08 in benefits for every £1 of expenditure in Present Value terms. This can be compared with an average value in excess of £4 for major Highways England projects, according to Road Investment Strategy 1, and a normal Highways England minimum threshold of £1.50 for schemes to be taken forward. The low value implies that the project would only be worth implementing if there were no financial constraints on government and no projects with a better economic benefit to cost ratio. Clearly this is not the case today.
8. We recognise that this project is exceptional because of the extra cost of the tunnel. However, the assessment also includes the alleged cultural heritage benefits, so we consider it should be judged by the same standards as other projects. We have also undertaken a rough calculation which suggests that the costs of a surface route would be likely to exceed its transport

benefits, so the scheme would be poor value for money, even if the particular circumstances of the World Heritage Site did not apply.

9. Not only is the economic case for the project weak, but it is subject to a number of major uncertainties, any of which could lead to the costs exceeding the benefits. These include:
  - a) Capital costs – the recent National Audit Office (NAO) Report indicates an upper bound cost estimate £500 million greater than that used in the appraisal;
  - b) The valuation of the alleged cultural heritage benefits – the NAO report notes that these account for nearly three quarters of the benefits attributed to the project and they are an area of considerable uncertainty (specific comments on the cultural heritage valuation are provided below);
  - c) The traffic growth forecasts that underpin the transport benefits assume levels of traffic growth that have not been observed for the past 15 years and Highways England have a history of over-estimating growth on trunk roads. Accordingly, we cannot be confident that the forecasts are robust.
  
10. Devon County Council and The Heart of the South West Local Economic Partnership argue that the benefit to cost ratio produced by Highways England does not fully reflect the potential economic benefits of the full A303 programme to the economy of the South West region. They base this view primarily on a study carried out in 2013 by Parsons Brinckerhoff, which included a survey of businesses in the region. However, there are a number of problems with this survey, which mean the results are not credible. These include:
  - a) The response rate to the survey was very low at 3% of businesses contacted;
  - b) The profile of respondents was not representative of businesses in the region and, in particular, the number of transport businesses was over-represented. These businesses have a particular interest in supporting road enhancements;
  - c) The survey instrument explained that it was about improving the A303/A358/A30 corridor, encouraging businesses that would potentially be affected to respond, and to respond favourably;
  - d) The survey did not investigate whether other transport investments, or non-transport interventions, would be seen as a higher priority by businesses.
  
11. However, Stonehenge Alliance does agree with Devon County Council and others that the project should be seen as an integral part of a programme to create an Expressway between the M3 and M5. While we do not agree that the programme will generate great benefits, it is clear that any significant benefits that do arise will only be unlocked once the programme is completed. Otherwise the main effect is likely to be to move summer peak congestion from the upgraded route section to other locations on the corridor. Therefore, we consider that the A303 Stonehenge project should be judged both on its own merits and as part of the overall corridor programme. Accordingly, we consider that it is vital that Highways England provides a

business case for the overall programme, so that the Examination can assess whether it provides good value for money. From the information provided in the NAO report, we consider that this is unlikely.

12. As explained above at para 4, the traffic forecasts used are vulnerable to error and uncertainty. If the actual traffic growth is less than forecast, the BCR will be overestimated. If the actual traffic growth is higher, it is unlikely that the scheme will be able to deliver the intended faster and more reliable traffic conditions, which might be considered a benefit if compared with the 'without' case, but would fail to deliver the scheme's objectives. In both cases the Examining Authority would be faced with a judgement about whether the scheme would be likely to deliver its intended benefits.
13. Mr Taylor, on behalf of Highways England, has argued that the benefit: cost ratio is part of the Department for Transport's decision making process and is not a relevant issue for the Examining Authority to consider. We strongly disagree with Mr Taylor and note that:
  - a) Clause 1.2 of the National Policy Statement for National Networks (NPSNN) states that "The Secretary of State must decide an application for a national networks nationally significant infrastructure project in accordance with this NPS unless he/she is satisfied that to do so would: ...result in adverse impacts of the development outweighing the benefits";
  - b) Clause 4.5 of NPSNN states "the economic case prepared for a transport business case will assess the economic, environmental and social impacts of a development. The information provided will be proportional to the development. The information will be important for the Examining Authority and the Secretary of State's consideration of the adverse impacts and benefits of a proposed development";
  - c) Section 104 (3) of the Planning Act 2008 states that applications must be decided in accordance with any relevant NPS, "except to the extent that one or more of subsections (4) to (8) applies". Subsection 7 applies if "the adverse impacts of the development outweigh its benefits";
14. Accordingly, it is clearly a responsibility of the Examining Authority to assess whether the adverse impacts of the project exceed the benefits, and to advise the Secretary of State accordingly. Of course, the monetised impacts contained in the economic case are not the only effects to be considered in making this assessment. In the case of the A303 Stonehenge project, there are numerous other negative impacts – for example on archaeology, biodiversity and hydrology – that are not quantified in the economic case and should also be included in the Examining Authority's overall assessment. In the Stonehenge Alliance's view, these un-monetised impacts, combined with the uncertainties associated with the economic case mean that the overall negative impacts of the project exceed its benefits by a large margin and consent should therefore be refused in line with the NPS and the Planning Act 2008.

## Agenda Item 8.1: Reliance on Monetisation of Cultural Benefits

15. Stonehenge Alliance has a number of significant concerns about the validity and reliability of the results of the contingent valuation study that was undertaken to create an estimate of the alleged cultural heritage benefits of the project. A number of important concerns were raised by other speakers at the Hearing and we did not seek to repeat them. However, we did put forward a number of additional arguments to support our view that the estimated value is unreliable and highly likely to over-estimate any benefit by a significant margin. These arguments are summarised below.
16. During the specification of the survey fieldwork, Highways England's consultant planned to divide respondents into three groups: visitors to Stonehenge, local residents within 50 miles of Stonehenge (who were thought to be likely to use the A303) and the general UK population. In analysing the results, it was found that many local residents had not used the A303 in the past year, but a substantial proportion of the general population group had done so. Accordingly, the consultant decided to reallocate the sample into the categories of visitors (as before), A303 users and general UK population. As a result of this reallocation, 23% of the members of the general population sample live within a radius of 50 miles of Stonehenge. This is very much higher than the actual proportion of the UK population living within this area and means that the sample is not geographically representative. This is a particular concern because one would expect that people living near Stonehenge would be more familiar with the monument and value it more highly than those living further away. As a consequence, we think it is highly probable that the average valuation for the general population group – who account for 94% of the total benefits – is significantly too high.
17. We recognise that Simetrica identified the risk of strategic bias where respondents provide answers that would support the outcome they wish to see, even if they would not respond in the same way in reality. However, we do not consider that the measures taken to exclude quick or extreme responses are sufficient to ensure strategic bias is not present. The finding that members of heritage groups and higher income respondents place a higher value on the supposed cultural heritage benefit than other respondents does not demonstrate that bias is not present – only that it applies across all population groups. This is a particular concern as the proposed payment mechanism – a three-year Stonehenge Tunnel Tax – is quite implausible and respondents could answer confident that they would never have to pay it in practice.
18. In other areas of transport research, it has been found necessary to scale Stated Preference results by reference to observed travel choices to obtain realistic results. In the early days of Stated Preference – before this became normal practice – some grossly exaggerated estimates of benefits were obtained. Clearly the results have not been scaled in this case and there is a significant risk that the benefits have been grossly over-stated.
19. Highways England have undertaken a comparison with the Mourato and Maddison study carried out in 1998. This examined a broadly similar proposition to the current proposal. Highways England have adjusted the 1998 results by reference to the following factors:

- a) Inflation;
  - b) Change in GDP per head;
  - c) Change in UK population;
  - d) Differences in the methodology for expanding the sample to total population by reference to individuals rather than households;
  - e) Differences in the proportion of the population expressing a willingness to pay for the alleged benefits.
20. Highways England claim that the combined effect of these factors would increase the 1998 benefits from £149 million to £1 billion. Based on the data quoted by Highways England, the combined effect of the first three factors would be to increase the benefits to about £279 million. Accordingly, the great majority of the increase relates to the detail of how the 1998 study was undertaken. We have not seen the report of this study and we think it is essential that it is provided to the Examining Authority and Interested Parties so that it can be scrutinised.
21. However, in relation to point (d) above, we presume that the 1998 survey asked respondents to provide a value of the project to their household and not to them as an individual. If so, it is incorrect to multiply the responses by the ratio of individuals to households in updating the results as Highways England have done.
22. In relation to point (e), the 1998 survey found that 37% of respondents would be willing to pay for the alleged cultural heritage benefits of the project as compared to approximately 60% in 2016. In their comparison, Highways England have increased the benefits by  $60/37=1.62$ . This is methodologically wrong. Each survey appears to have sought to establish: the proportion of the sample willing to pay and the amount per head they would contribute on average; the proportion requiring compensation and by how much; and the proportion who would neither contribute nor require compensation. The total value is the sum of the results for these three groups. It is completely unjustified to change the proportion of people willing to pay in the first survey, because it differs from that in the second one and then use this to claim the results are similar.
23. Unless Highways England can provide compelling evidence to show that adjustments (d) and (e) are valid, no credibility can be attached to the assertion that the results are similar when considered on a comparable basis. The differences between them - after allowing for inflation, population growth and increased GDP per head – are so great that they confirm our view that contingent valuation is not a technique that is sufficiently robust to produce consistent results.
24. The contingent valuation used in this scheme is different from that which has been used in other road appraisal in three ways:

- a) Firstly, unlike the widespread use of stated preference methods for assessing the value of travel time savings, it has not been subject to prolonged informed assessment and scrutiny by transport economists of the Department for Transport's own advisory processes.
  - b) Secondly, it gives non-transport intended benefits a very much greater value than in any other scheme.
  - c) Thirdly, it has not been subject to any credibility check of whether the figure can be supported by other evidence. Such a check might be given by consideration of the demonstrated willingness of members of the public to pay real money, for example in charitable appeals.
25. Even assuming the most massive publicity, overwhelming support by opinion-leaders, and social support at the level of, for example, a Poppy Appeal, Comic Relief, etc, it is implausible that more than about £50 million would be collected, and inconceivable that £1.3 billion would be given. This point is supported by the convincing argument by another witness, Andrew Nicolson, that such a valuation must logically be inversely proportional to the number of competing projects, and it is therefore not analogous to a BCR used in the assumption of effectively unlimited funds, which would be necessary to justify a BCR of a little over 1, or limited public expenditure constraints which lead to necessary BCRs of 2, 3 or 4.
26. We also note that the contingent valuation has not been used in another element of the appraisal, for the value of the damage caused by the extra volume of CO2 emitted by the traffic induced by the scheme, for which a lower shadow price has been used dating from before recognition of climate emergency, and change of the Government target for zero net emissions by 2050. This means that simply adding together the overestimated heritage benefit, and underestimated carbon cost, will doubly bias the appraisal.
27. In their report the NAO stated that "While Highways England used approved methodologies to do this, calculating benefits in this way is inherently uncertain...". Highways England claimed that this meant that the NAO did not have any issues with the survey itself. However, Appendices 1 and 2 from the NAO report show that despite interviewing local, regional and heritage stakeholders on the background and progress of the scheme, none were interviewed about perhaps the most important aspect: the case for investing in the scheme. In this instant, no-one aside from staff at the Department of Transport and Highways England were interviewed and consequently, the NAO were not made aware of the serious concerns about the way the survey results were arrived at. As Professor Phil Goodwin stated, this sort of valuation survey requires an iterative and open approach to have any form of validity, which has not happened here. In fact, it has been quite the reverse, with some details still not before the Examination, while those that have been submitted are in appendices where they could have been missed.
28. Also, the NAO did not approach The Stonehenge Alliance, as a key stakeholder in this process. Had they done so, it is likely that they might well have expressed further concerns about the

contingency valuation, going beyond the fact the outcome was 'uncertain', to more likely totally unreliable.

29. We would also strongly refute Highways England's claim that the survey is not an important consideration. The fact is that the BCR without any heritage value is an appallingly low 0.31. Only by using this inflated and flawed heritage valuation survey can it get anywhere near being passable and that is the reason it was included. To now seek to deny the need for this survey and the need to consider value for money and the weighing up of costs and benefits in the decision making process, illustrates how desperate Highways England have become.

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

**Scheme Reference: TR010025**

**Summary of Oral Representations made at Issue  
Specific Hearing 7: Biodiversity, biological environment  
and ecology**

**for**

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

**by**

**Dr. Kate Fielden and Charlie Hopkins**

## **Issue Specific Hearing 7 on 14 June 2019: Biodiversity, biological environment and ecology**

### **written summary of oral submissions in agenda order**

by Kate Fielden and Charlie Hopkins

#### **3. Effects on Stone Curlew and adequacy of proposed mitigation measures**

##### *3.1. New Stone Curlew breeding plot at Parsonage Down*

The SA submits there is no certainty that the replacement plot would ensure use by breeding Stone Curlew. It is perhaps an academic point, since the mitigation will presumably be considered acceptable as normal practice.

##### *3.3. progress report on legal agreements*

The SA is not clear on what the outstanding issues re the HRA are between RSPB, Natural England and Highways England. It was agreed we might be informed outside the Examination.

##### *3.4. Effectiveness of provisions within the OEMP to prevent disturbance to nesting birds during construction*

We note that a 500m protection zone is now agreed instead of 450m.

Measures suggested don't give certainty that there would be no problems. Is it a sensible prospect for construction work to stop during nesting or foraging within the 500m zone?

Screening, noise (and sudden unexpected noise) could cause problems; also lighting, especially if timing demands working later hours. If work could be phased not take place during nesting, that might help – but that is an obviously impractical suggestion.

SA is concerned that detail will be left to the contractor stage: the Secretary of State will need assurance re the Habitats Regulations that there will be no adverse effects beyond reasonable scientific doubt prior to any grant of consent.

#### **5. Effects on the water environment (SAC)**

##### *5.1. potential for development to achieve net gain to wetland habitat*

Drainage to the Blick Mead area and River Avon [SAC] via culverts would be with no treatment of runoff. (It was argued at an earlier hearing, that the increased road surface with flyover would generate more runoff than at present.) Potential pollution affecting the SAC arising from the tunnel construction has not been fully addressed. There is potential for some gain to be made here – at least with treatment of runoff.

#### **8. Any other matters**

SA is concerned at the volume of work in progress in relation to the SPA and SAC when a very high degree of certainty is required by the European Directives [and Habitats Regs]. We asked if it would be possible to discuss at a further hearing matters to do with the Draft DCO and OEMP when they have progressed to a stage of greater certainty?