

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

Scheme Reference: TR010025

**Response to Highways England's Document
"8.44 - Comments on any further information
requested by the ExA and received at Deadline 5
and 6" (REP 7-021)**

**Inquiry Reference TR010025-001438
for**

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

by

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1. Overview

1.1 This document provides The Stonehenge Alliance's response to Highways England's document "8.44 - Comments on any further information requested by the ExA and received at Deadline 5 and 6" (REP 7-021). We focus on responding to Section 6 of the document, which comments on The Stonehenge Alliance's submissions. The absence of a comment on a particular issue does not imply that we agree with Highways England on that point.

1.2 We note that there are numerous paragraphs in the various documents, on which Highways England are commenting, that they have chosen not to challenge in their submission. It is important that these sections are not overlooked by the Examining Authority in considering the evidence submitted to them.

1.3 We are concerned that, in a number of their responses, Highways England have not sought to respond to the substance of the case put forward by The Stonehenge Alliance. Instead they have chosen to either misrepresent our position, or to repeat previously made points of marginal relevance to the issue being considered, or both. We consider this to be unhelpful to the Examination.

1.4 Highways England's document is set out in tabular form with a paragraph number, a summary of the point on which they are commenting and then their comment. In this document, we quote their paragraph number to which we are responding, a brief summary of the subject matter and then our response. For clarity, this document should be read alongside Highways England's submission.

2. Comments on Highways England's Response to REP 5-022 (Section 6.1)

2.1 In Section 6.1 of their document Highways England reply to comments made by The Stonehenge Alliance (REP 5-022) in response to their Submission 4-036 "8.31 Comments on any further information requested by the ExA and received to Deadline 3". We set out our further comments below.

2.2. Paragraphs 6.1.1–3, insufficient understanding of groundwater conditions.

The Alliance maintains its position as set out. Please see also the slides and presentation notes by Dr Reeves prepared for ISH 10. Dr Reeves' current opinion is that Whitway Rock is present but not fully identified and that it could have a profound impact on groundwater movement in tunnelling.

Highways England says that

"[REP3-018] Figure 2 shows the stratigraphic position of the Whitway Rock if it were present in the area. It would be situated largely above the tunnel profile and therefore would not have a

significantly different effect on groundwater levels compared to the effects described in the Groundwater Risk Assessment [APP-282]. See also the Environment Agency response to the potential presence and location of the Whitway Rock in REP4-049, paragraph 1.2.3, which recognises that this unit has not been mapped in the area and if present is expected to be above the tunnel elevation.”

The Stonehenge Alliance suggests there is evidence to show that the Whitway Rock horizon is present and not entirely above the tunnel elevation: this could substantially change the situation as given by Highways England. Clarity on this issue is vital to the viability of the Scheme and to those areas affected by groundwater movement.

2.3. Paragraphs 6.1.4–10, obligations under the World Heritage Convention.

Highways England has simply reiterated its position without addressing the specific points raised by the Alliance. Our position remains as set out.

2.4. Paragraph 6.1.11, rejection of 4.5 kilometre tunnel option

In their response on this point, Highways England refer to their reply to the Examining Authority’s question AI. 1.29. Firstly, this relates solely to a western extension to the tunnel section and ignores the fact that the project, as currently proposed, includes surface sections within the World Heritage Site, at both the eastern and western ends of the tunnel. They state that the “locations of the eastern and western tunnel portals have been identified as the optimum locations when all environmental, technical and economic considerations are taken into account.” However this optimisation process took place in the context of a prior decision to construct a tunnel of approximately 2.9 kilometres under part of the World Heritage Site. Irrespective of whether this optimisation work was undertaken correctly, it simply did not consider options with no surface road construction within the World Heritage Site, because “long tunnel” options had already been discounted. Accordingly the “long tunnel” solution was not subject to development work to optimise it, or public consultation, or a full appraisal. In their response to AI. 1.29, Highways England acknowledge that a full heritage impact assessment was not undertaken for the 4.5km “long tunnel” or indeed a longer tunnel option beneath the whole WHS. This is very significant, given that impact on cultural heritage would be the main potential benefit of such options. Highways England claim that there is no evidence that a longer tunnel would have greater cultural heritage benefits, but we consider this is implausible. If the partial tunnel option has a benefit with a Present Value of £955 million (which we doubt), a full tunnel option should logically have a greater value, as well as potentially eliminating direct impacts on the archaeology of the World Heritage Site. The Stonehenge Alliance’s position remains that the “long tunnel” option was dismissed too early and this is one of a number of significant flaws in the option assessment process. This is not withstanding our current view, based on emerging information about the geology and hydrogeology of the tunnel route, that any tunnel could be an impractical solution.

2.5. Paragraph 6.1.12, Impacts of Option F010

Highways England misrepresent The Stonehenge Alliance’s position by claiming that we have stated that “the option F010 route has been rejected on traffic grounds alone”. This is not our position and The Stonehenge Alliance argument that they quote at Paragraph 6.1.15 clearly demonstrates this. However, traffic considerations have been an important part of the argument put forward by

Highways England in support of the rejection of this option and we challenge the validity of their position. As we have stated previously, we do not think the traffic analysis is robust nor that it supports Highways England’s conclusions. While we do not have the resources to review all aspects of Highways England’s assessment, the shortcomings of the traffic analysis inevitably raise concerns about the validity of the process as a whole. Please see further comments in the paragraphs below.

Highways England refer specifically to their response to the Examining Authority’s question AI. 1.11, in which they summarise the reasons for rejecting Option F010 in a series of bullet points. These are briefly summarised below with our comments.

Highways England Point	Stonehenge Alliance Comment
Longer route with increased journey time relative to D061/D062	Agreed, but it is still significantly faster than Do Minimum according to HE’s modelling, and would provide all the journey time reliability benefits which HE claim are a key driver for the alleged need for the project. NB this is included in the Benefit: Cost Ratio (BCR) below, so they are double counting this argument
Likely higher NOX emissions than D061/ D062	Preferred route has a total local air quality benefit of £300,000 (Combined Modelling and Appraisal Report, Table 5-7). If F010 is less beneficial, the difference is unlikely to be significant in the overall appraisal
Lower BCR (0.3) relative to D061 (0.4) and D062 (0.5)	All the options would be rejected on the basis of these BCRs. When HE included the results of the Contingent Valuation Study and also sought to monetise the negative environmental impacts of F010 outside the WHS, the BCRs became : D061: 1.3 to 1.5 D062: 1.4 to 1.6 Fo10: 1.4 to 1.7
Lower accident benefits	The accident benefits of the preferred option are only £4.4 million (Combined Modelling and Appraisal Report, Table 5-6) so this would not be decisive. NB this is included in the BCR above, so they are double counting this argument
Viaducts over Rivers Till and Avon	Unclear if this is a cost or environmental factor. If it is a cost, it is included in the BCR. If it is an environmental issue it is included in the adjusted BCR and needs to be weighed against impact of D061/ D062 on WHS
Greater impact on rural landscape	It is included in the adjusted BCR and needs to be weighed against impact of D061/ D062 on WHS
Greater impact on biodiversity (“very large negative”) relative to “large negative” for D061/ D062	This is a judgement and this is more an issue about whether the project should be approved at all rather than a determinant of the preferred option
Poorer alignment to Client Scheme Requirements	See below

The Client Scheme Requirements were:

- “Transport: to create a high quality route that resolves current and predicted traffic problems and contributes towards the creation of an Expressway between London and the South West”. F010 was scored “2” while the other options were scored “3”. Even if one accepts the logic for the project – which The Stonehenge Alliance does not – this is a disproportionate difference between the options, given the small difference in journey time savings.
- “Economic growth: in combination with other schemes on the route, to enable growth in jobs and housing by providing a free flowing and reliable connection between the South East and the South West peninsula”. Again, F010 was scored “2” while the other options were scored “3”. It is even less plausible that there would be a difference in the alleged economic benefits – which appear to be substantially about journey time reliability – due to a small difference in journey times.
- “Cultural heritage: to contribute to the conservation and enhancement of the WHS by improving access both within and to the site”. F010 is scored as “3” compared to “2” for the other options. We consider this is unduly favourable to D061/ D062, given that they involve the construction of sections of surface road and approach cuttings within the World Heritage Site.
- “Environment and community: to contribute to the enhancement of the historic landscape within the WHS, to improve biodiversity along the route, and to provide a positive legacy to communities adjoining the road”. F010 was scored “2” while the other options were scored “3”. Clearly F010 performs best against the first part of this requirement and we are not convinced that the lower overall score is justified.

Given the above, we do not consider that the assertion that F010 performs less well against the Client Scheme Requirements is valid.

For the avoidance of doubt, The Stonehenge Alliance is not advocating the adoption of Option F010, but we do consider that the option assessment process was flawed and it should have been taken forward to public consultation. This would have provided a wider choice of options and elicited the public’s views on issues including the balance between impacts within and outside the World Heritage Site, which is clearly an important matter.

2.6. Paragraph 6.1.13, Impacts of Option F010

As set out above, the Stonehenge Alliance is not “seeking to pursue a course that misrepresents the selection procedure for F010 by presenting traffic issues as the central argument.” It is however an important part of Highways England’s submission, including in relation to the environmental impact on villages north of the existing A303. We note that Highways England have not sought to respond on the issue of rat running nor have they produced evidence based on the final DCO model. They have not provided a substantive answer to our comments on their response to question AI. 1.11 [REP3-063 Section 3.2]. This showed that, in relation to the relevant roads north of the A303:

- a) The modelling is not very robust;

- b) Forecast traffic flows are relatively low in the Do Minimum, suggesting that congestion is not a major problem on these roads;
- c) Far from increasing traffic, Option F010 reduces total traffic on each route section, and it is hard to argue that it would result in unacceptable traffic volumes.

2.7. Paragraph 6.1.14, Impacts of Option F010

Please see Paragraphs 2.4 and 2.5 above.

2.8. Paragraph 6.1.15, Impacts of Option F010

Please see Paragraphs 2.4 and 2.5 above. It should be noted that the Stonehenge Alliance text to which Highways England are responding, clearly demonstrates that their statement in Paragraph 6.1.13 that we are ““seeking to pursue a course that misrepresents the selection procedure for F010 by presenting traffic issues as the central argument” is untrue.

2.9 Paragraph 6.1.16, value for money estimates

Highways England do not respond to The Stonehenge Alliance’s point, which is that the transport benefits of the scheme would be unlikely to outweigh its costs, even if the project was not located in the World Heritage Site and a surface option was feasible. This implies that the uncertain alleged benefits to cultural heritage are required not only to counteract the extra cost of the tunnel but also to counteract the probably negative Net Present Value of the scheme if “normal” conditions applied and to create the very marginally positive Benefit: Cost ratio. This further demonstrates that the case for the project is very weak.

2.10. Paragraph 6.1.17, archaeology along the route options

Highways England’s response to our comments is incorrect. The boundary of the Stonehenge part of the WHS was drawn not simply for ease of defining it but primarily because contained within it are all the elements or attributes necessary to convey its OUV, integrity and authenticity, as required under UNESCO Operational Guideline 99 concerning WHS “Boundaries for effective protection”:

“The delineation of boundaries is an essential requirement in the establishment of effective protection of nominated properties. Boundaries should be drawn to incorporate all the attributes that convey the Outstanding Universal Value and to ensure the integrity and/or authenticity of the property.”

What lies within the WHS boundary does indeed relate to the extent of significant archaeology that may contribute to the OUV of the WHS.

2.11. Paragraph 6.1.18, Variable Demand Modelling

Highways England respond at their Paragraph 6.2.7 and our comments are set out below in Paragraph 3.8.

2.12. Paragraph 6.1.19, Extent of Model Area

We thank Highways England for clarifying that the model extends as far as M3 Junction 4 at Frimley. However this appears to be inconsistent with Figure 3-2 of the Combined Modelling and Appraisal Report, which seems to show the limit of the fully modelled area as being south of Basingstoke.

Could Highways England confirm that the section of the M3 between Junctions 4 and 8 is within the area where traffic flows are “fully simulated including junction modelling” (Combined Modelling and Appraisal Report, Paragraph 3.2.10)? If yes, why is this not shown in Figure 3-2?

2.13. Paragraph 6.1.20, Traffic to and from M3

Highways England respond at their Paragraph 6.2.3 and our comments are set out below in Paragraph 3.4.

2.14. Paragraph 6.1.21, Distribution of Delays

Highways England respond on the use of Trafficmaster data in their Paragraph 6.2.9 and our comments are set out below in Paragraph 3.10. They also address the issue of the distribution of business user time savings as a result of the project. Section 6.6.2 of the economic package (App-302, not App-602 – which does not exist – as incorrectly stated by Highways England) sets out the forecast time savings on the A303 as a result of the project and shows them to be 2 to 3 minutes in each of the forecasting years (not just in the opening year as asserted by Highways England). We agree that a saving of 2-3 minutes is not imperceptible, but it is not dramatic or transformational either. It would not be very significant in the context of a longer distance journey, such as from London to Exeter. In any case, this misses the point that The Stonehenge Alliance was making. Our understanding is that the economic appraisal takes account of changes in journey time across the modelled network (with the exception of some irrelevant movements that were masked out). These changes result not only from faster journeys on the A303: Highways England have now provided new information which shows the majority of the benefits derive from savings of between 2 and 5 minutes. This is not a dramatic time saving. We also note that only 12% of business user time saving benefits relate to goods vehicles and therefore it is not surprising that Highways England’s own assessment of the Wider Economic Benefits to the regional economy shows that these would be small.

2.15 Paragraph 6.1.22, Benefits to Business

We are pleased that Highways England agree that the full range of monetised and non-monetised benefits should be taken into account in assessing the project. In their response Highways England re-state their position on the overall strategic case for the project. The Stonehenge Alliance disagrees with this as set out in detail in our Written Representation on Transport Planning and Economics Issues [REP 2-129].

2.16. Paragraph 6.1.23, Funding Availability

The Stonehenge Alliance remains of the view that there is considerable uncertainty about funding for the project, as set out previously.

3. Comments on Highways England’s Response to Comments on Their Written Summaries of Oral Submissions at Issue Specific Hearings: Sect. 6.2

3.1. Following the series of Issue Specific Hearings held in June, Highways England provided Written Summaries of their oral submissions. These are set out in REP 4-029 to 4-035. Subsequently, The Stonehenge Alliance provided comments on them in REP 5-021. Section 6.2 sets out Highways England’s response to these comments. The Stonehenge Alliance provides our further response in the paragraphs below.

3.2. Paragraph 6.2.1. Range of photomontages and choice of receptors

Our comments as set out here, concerning photomontages and dynamic views of the Scheme within the WHS remain as stated, irrespective of Highways England’s comments on them.

3.3 Paragraph 6.2.2, Extent of Modelled Area

The Stonehenge Alliance agrees that the maps in Road Investment Strategy 1 show similar levels of congestion on the M3 and M4 and that this does not necessarily imply any shift between them, although this could occur depending on precisely how congested each route has become. However, Highways England’s case for the scheme includes a shift from the M4 to the M3. This would further increase congestion on the M3 and, in reality, this could prevent some or all of this transfer occurring. Highways England refer to REP 3-013. In this document they clearly state that they have applied fixed speeds (in a specific forecasting year) outside the fully modelled area. While these speeds represent the forecast background level of congestion in that year, journey times do not vary with traffic flow in that year. Accordingly, the modelling in the buffer and external areas, is not sensitive to switching between the M4 and M3. The Stonehenge Alliance considers this to be an outstanding issue of concern.

3.4 Paragraph 6.2.3, Extent of Modelled Area

Highways England’s response on this point is set out in three paragraphs. The first paragraph simply repeats their argument from REP 4-034. The Stonehenge Alliance text to which they are responding shows that this argument is not valid. The second paragraph refers to model results for high and low growth scenarios. This is irrelevant because it is based on modelling based on fixed speeds to the east of the fully modelled area. The third paragraph states that there is no basis to “explain let alone sustain the conjecture that congestion [on the M3] would extend to a material extent over the course of the day.” It is self-evident that, as traffic flows rise, congestion will occur in additional hours, even if the traffic profile remains the same. Moreover, it is well known that increases in peak period congestion result in “peak spreading”, where some drivers re-time their journeys to the shoulders of the peak to avoid the worst congestion. In turn, some existing shoulder peak journeys may also shift. Clearly, the effect of this will be to further increase the number of hours in which congestion occurs.

3.5 Paragraph 6.2.4, Extent of Modelled Area.

The Stonehenge Alliance’s understanding is that Highways England’s position is that approximately 30% of traffic using the A303 at Stonehenge also uses the M3; 20% could potentially switch to the M3, but no more than 2% would do so. From this it is clear that traffic to and from the M3 is not of

minimal relevance. It is clearly essential to the case for the scheme – without this traffic, the already very weak and uncertain case would be non-existent. This is distinct from Highways England’s argument that only 2% of traffic might switch to the M4. The reasons why this assertion is not robust are set out in REP 5-021 and in the comments above. The Stonehenge Alliance also disputes Highways England’s assertion that they have provided sufficient detail for stakeholders to have a clear understanding of the validity or otherwise of their modelling. If Highways England is unwilling to provide access to the model database or to allow stakeholders to interrogate it under their supervision, they could at least provide trip matrices – in MS Excel format – together with a zone plan to enable stakeholders to better understand the relevant movements.

3.6 Paragraph 6.2.5, Extent of Modelled Area

This point has been addressed in Paragraph 3.4 above.

3.7 Paragraph 6.2.6, Extent of Modelled Area

The Stonehenge Alliance considers that the extent of the fully modelled area remains a matter of concern for the reasons set out in Paragraphs 3.3 to 3.5 above. Highways England have provided no new information in this document to allay those concerns.

3.8 Paragraph 6.2.7, Variable Demand Modelling

The Stonehenge Alliance cannot comment on whether the Variable Demand Model has been calibrated and validated in accordance with WEBTAG Unit M2 as claimed by Highways England. This is because we have not had access to the calibration and validation report for the South West Region Traffic Model (SWTRM), and especially the variable demand modelling element of it. From the very limited information provided in Highways England’s response, we understand that they are claiming that national parameters defined in guidance were found to be appropriate to the regional traffic models and that the evidence of sensitivity of these parameters is based on national not local sensitivities. From this it is hard to escape the conclusion that the *variable demand modelling* element of SWTRM was based on national, not regional or local, responses. In any case our original concern was that the model was calibrated on data for the whole of the South West rather than local data; and might not reflect the responses of potential future users of the A303. Therefore calibration at either regional or national level is a concern.

Highways England stress that they have complied with the guidance in WEBTAG Unit M2. However we note that this document states:

- a) “Variable demand models should be **calibrated on local data**, to reflect the local strengths of the choice mechanisms, or where this is not possible; **the illustrative parameter values presented in this unit may be used**” (Para. 1.3.1, DfT emphasis). It appears that the “illustrative” values have been used by Highways England, although they have provided no evidence that using local values was “not possible”.
- b) “No matter how carefully the model has been constructed and coded, if the parameter values are wrong the appraisal will be wrong” (Para. 5.6.2); “locally calibrated parameters should be used wherever possible” (Para. 5.6.3). We agree with both these statements.

- c) “The [illustrative] parameter values for main mode choice and destination choice have been derived from “Multi-Modal Data Provision” by MVA, dated June 2005. Information was also obtained from Rand Europe PRISM model of the West Midlands.....These illustrative parameter values represent the current best estimates but are necessarily uncertain” (Para. 5.6.4). We agree that they are uncertain but they are also dated. The models assessed by MVA for their 2005 report must have been calibrated prior to their study, based on data collected even earlier. Accordingly they do not reflect the important changes in travel behaviour over the past 15 years, as discussed in our original Written Representation [REP 2-129].

We also note that the illustrative parameter values for main mode choice and destination choice are based on a small number of studies, as shown in Tables 5.1 and 5.2 of Unit M2. These range from 7 studies for commuters’ destination choice to only one study for mode choice for non-home based employer’s business.

3.9. Paragraph 6.2.8, Traffic Growth Forecasts

Highways England provide no new information in their response. They have assessed the robustness of the project within a narrow range of traffic growth forecasts and it is therefore not surprising that this does not have a “material impact” on the results.

3.10. Paragraph 6.2.9, Frequency of Busy Days

The Stonehenge Alliance is well aware of the data that were used to calibrate the traffic model and our concerns in relation to the model are set out in detail in REP 2-129. While we have concerns about the modelling, the issue that we raised is that the Trafficmaster data has been presented to the Inquiry in a way which starts from an unrealistic baseline – in effect free flow conditions – and therefore exaggerates the alleged need for the project. We also think that providing additional information would promote informed debate, as noted previously. Regrettably this no longer appears possible within the timescale of the Inquiry.

3.11. Paragraph 6.2.10, Option Assessment

The Stonehenge Alliance disagrees with Highways England’s repeated assertions that the option assessment process has been undertaken in an objective and proportional way, or that adequate public consultation has been carried out, as required by the National Policy Statement on National Networks. Specifically in relation to Option F010, please see Paragraphs 2.3 to 2.5 above. Paragraph 2.2 is also relevant in relation to the premature decision to drop the 4.5 kilometre option.

3.12 Paragraph 6.2.11, Option Assessment

Please see Paragraphs 2.6 to 2.8 above which highlight some of the flaws in the assessment process in relation to Option F010. Please also see our comments on the option assessment process contained in REP2-133, REP 2-129 (Section 4), REP 3-063 (Section 3), REP 4-056 (submission on public consultation and Section 3 of the submission on transport planning and economics), REP 5-021 (Section 3 of the submission on transport planning and economics) and REP 5-022 (responding to Paragraphs 11.1.2 to 11.1.5 of a prior Highways England submission).

3.13. Paragraph 6.2.12, Option F010

Highways England state that “the longer distance and alignment of F010 make this option less attractive for local movements than D061 / D062 and it is more likely that trips making local movements, including HGVs, will use the local roads north of the A303.” Highways England’s own modelling shows that forecast flows on these local roads are relatively low in the Do-Minimum and even lower with Option F010 (as noted in Paragraph 2.6 above). We acknowledge that the modelling does not include the impact of drivers diverting on to local roads if there is a blockage on the A303. However this is *less* likely to occur with Option F010 than Options D061/D062 because it moves the A303 further to the south.

3.14. Paragraph 6.2.13, Option F010. Please see Paragraphs 2.6 and 3.13 above. We note that, first, Highways England have still failed to provide their definition of rat running or to respond to the paragraph they quote, apart from repeating arguments that The Stonehenge Alliance has previously shown to be invalid or doubtful, based on information provided by Highways England.

3.15. Paragraph 6.2.14, Economic and Cost Benefit Assessment

The Stonehenge Alliance acknowledges that the Highways Agency has sought to defend the Contingent Valuation Study in its written representations. At this point we were merely expressing our disappointment that it chose not to have a representative of the team that undertook the study at the Issue Specific Hearing. This would have allowed the Examining Authority to question those responsible for the work directly and for them to respond to the numerous points raised by Interested Parties.

3.16. Paragraph 6.2.15, Economic and Cost Benefit Assessment

As the Application documents make clear, the economic case for the scheme is very weak, with a benefit: cost ratio of only 1.08. The findings from the Contingent Valuation Study (CVS) account for over 70% of the benefits. If this is not included the monetised costs greatly exceed the benefits and there is therefore no economic case for the scheme to proceed. In their response on this point Highways England argue that the economic benefits exceed the costs, yet they argued at the Issue Specific Hearing (and in Paragraph 6.2.16 below) that the benefits from the CVS do not form part of the economic case. Either the benefits from the CVS are included in the economic case, in this situation it is weak and uncertain, or they are not, in this situation it is non-existent. This seems to be a case of Highways England seeking to “have their cake and eat it”.

3.18 Paragraph 6.2.16 and 6.2.17, Economic and Cost Benefit Assessment

Highways England seek to make a distinction between impacts to the economy and impacts on cultural heritage, expressed in money terms. They argue that the latter is not relevant to the Examining Authority’s assessment. However the purpose of the economic appraisal is to assess the overall impacts on social welfare, not just direct impacts on the economy. The Treasury Green Book¹ makes it clear that “economic appraisal is based on the principles of welfare economics – that is, how the government can improve social welfare or well-being” (Para. 2.3). Subsequently it states “social CBA [cost benefit analysis] requires all impacts – social, economic, environmental, financial

¹ HM Treasury “The Green Book: Central Government Guidance on Appraisal and Evaluation”, 2018

etc. – to be assessed” (Para.2.10), although it recognises it may not be possible to monetise some impacts. Given that Highways England *have* monetised the alleged cultural heritage benefits (unreliably in our view), there appear to be no grounds for excluding them from the appraisal, especially as they are essential to their overall case. Moreover a substantial proportion of the other alleged benefits of the project, for example journey time savings for non-business travellers, have no direct economic impact and these too are monetised using social welfare principles. It is inconsistent to include some alleged social welfare benefits and exclude others. As we have noted previously, the economic case for the scheme is highly relevant to the Examining Authority’s assessment of the project, as set out in Paragraph 4.5 of the National Policy Statement for National Networks.

3.19. Paragraph 6.2.18, Economic and Cost Benefit Assessment

We note that Highways England has not responded on the issue of cost uncertainty highlighted in the National Audit Office report. In relation to the benefits, described as Willingness to Pay (WTP) by Highways England, we cannot find the source for the claimed range of £1.1 to £1.5 billion and note that even Highways England are not confident that the project’s monetised benefits exceed the costs of £1.206 billion at the 95% confidence level. We also note that, in this response, they are including the cultural heritage benefits despite claiming they are not relevant to ExA’s assessment. In any case, standard statistical tests allow for uncertainties arising from factors such as the use of sample data, but not systematic biases in data collection nor in the design of surveys. The Stonehenge Alliance believes that both of these are present in the Contingent Valuation Study as set out previously, including in REP 2-129 (section 4.5), REP 2-130 and REP 4-055 (Paragraphs 15 to 18 of the section concerning Issue Specific Hearing 6). In our view this makes the results of the Contingent Valuation Survey much more uncertain than standard tests would imply, and probably over-stated.

3.20 Paragraph 6.2.19, Economic and Cost Benefit Assessment

Please see Paragraph 3.18 above.

Highways England may disagree with the Stonehenge Alliance comment that ‘this project has major negative impacts, for example on archaeology’ but we see no reason to change our minds. The damage to archaeology and the WHS itself cannot be denied and is endorsed in the evidence put before the ExA, notably from independent specialist archaeologists and ICOMOS-UK whose views are supported by the 2019 Decision of the World Heritage Committee.

Issue Specific Hearing 7: Biodiversity and Ecology

3.21. Paragraphs 6.2.20–22. Effects on Stone Curlew and Great Bustard and adequacy of proposed mitigation measures

The Alliance’s views set out in our REP5-021, paras. 2.1.2, 3.1.2 and 4.1.2, on the competent authority’s legal requirement for certainty of no adverse effect on Stone Curlew and Great Bustard during Scheme construction and operation, remain unchanged. Measures to ensure certainty should be provided at the DCO stage and not left to the contractor’s employees to decide later.

3.22. Paragraph 6.2.23. Effects on water environment – River Till and River Avon SAC

We have not denied that a closed face TBM would be required. Highways England is unable to assure Interested Parties that de-watering would not be needed (it has provision for it in the OEMP); nor has it explained how contamination arising from grouting would be avoided. What happens if, once tunnelling has started, de-watering and pollution are unavoidable? Assurance is also missing

that there would be no contamination of the Avon from untreated road runoff. The decision-maker needs certainty, beyond reasonable scientific doubt, that there will be no adverse effects on the SAC. This appears impossible, at present.

**3.23. Paragraph 6.2.24. Agenda item 8: Any other matters:
*in-combination effects on protected birds***

Highways England has not addressed the issue we raised. There will be *additional* in-combination effects from increased recreation of occupiers of new army housing. This has not been taken into account and assessed by Highways England. Would two new plots for Stone Curlew be sufficient mitigation?

The “clarification note” (REP6-039) referred to by Highways England does not state unequivocally that the proposed new nesting plots will be “in the vicinity of the scheme”.

Will the Statement to Inform the Appropriate Assessment be revised as we suggest?

4. Section 6.3: Comments on Revision 1 of the Draft Detailed Archaeological Mitigation Strategy [REP4-025]

**4.1. Paragraph 6.3.1. DDAMS Section 2. Principles for archaeological mitigation:
Section 2.2. General Principles.**

Our views as set out here also apply to Section 2.2.3 in the dDAMS Rev. 3 (REP7-019) and remain unchanged. Archaeological evaluation work in the area of the western cutting continued well after the HIA was submitted with the DCO application documents. The concentrated flint scatters in this area are obviously of more than “limited value” as independent specialists in the archaeology of the WHS have pointed out and there can be little doubt that, by defining all that may be left of discrete “associated sites” in terms of OUV, they may be counted as attributes of OUV.

4.2. Paragraph 6.3.2. DDAMS Section 2.3. Detailed Principles

We consider it highly significant that the wording of the bullet point under para.2.3.1 of the dDAMS at Rev.1 was changed in the version submitted by the Applicant at Deadline 6. The original wording read: “Do not harm the integrity or authenticity of the WHS or the assets that contribute to the OUV of the WHS”

We naturally commented that this principle is not being followed by Highways England in respect of the Scheme. If it is being followed as the Applicant asserts, why has the bullet point (now bullet pt.10) been changed to read:

“Avoid and minimise harm to the integrity or authenticity of the WHS or the assets that contribute to the OUV of the WHS”?

The new wording, by providing choices, appears to give greater leeway for damage to the WHS by the Scheme. As we pointed out in our response to the dDAMS Rev. 2 (REP7-050), the wording now makes little sense as it stands in the context of what is required, since it is essential that all of these aspects of the WHS be protected, not just one or another. Bullet point 10 would benefit from re-drafting: this also applies to bullet pt.10 in para. 2.3.1 of the dDAMS Rev.3 submitted at Deadline 7 (REP7-019).

4.3. Paragraph 6.3.3. DDAMS Section 3. Archaeological research strategy

New evidence *has* been produced as a result of evaluation, some of it after the HIA was compiled. It is clear that members of the Scientific Committee who are *independent specialists in the archaeology of the WHS* do not agree that remains that will be removed as a result of the Scheme do

not make a significant contribution to the OUV of the WHS. There may well be, in addition, unknown remains such as burials, still to be identified. We stand by our comments under our paras. 2.1–3 in this section, which also apply in the case of the dDAMS Rev. 3, Section 3.

4.4. Paragraph 6.3.4. “Research Questions” following sections detailing archaeology and new finds would fail to be adequately answered

The Stonehenge Alliance maintains its position as set out here in our para.2.4. Our position remains the same in respect of the same matter in the dDAMS, Rev. 3.

4.5. Paragraph 6.3.5. DDAMS Appendix E. Public Archaeology and Community Engagement Strategy

We see no reason to change our opinions expressed under this section. It is obvious that implementation of the Scheme would signal the acceptability of permanent and severe damage to a WHS in the face of specific planning policy and guidance and UNESCO’s reminders concerning HMG’s obligations under the WH Convention. The clear message of the Scheme is that HMG no longer cares enough about the protection of our national heritage of the highest significance. The implications are, therefore, a serious loss of confidence in those bodies responsible for heritage protection; and that it will be acceptable for possibly less important heritage assets valued by local communities throughout the country not to be protected as they should be.

5. Section 6.4: Responses to the Examining Authority’s Second Round of Written Questions

5.1. Paragraphs 6.4.1–7. Need for thorough engineering geophysical assessment of the whole proposed A303 road and tunnel route; the presence of Whitway Rock and its implications, etc.

The Alliance’s views on this matter remain unchanged, even more so now since Whitway Rock, not identified by Highways England, is now considered by the Alliance to be present with profound implications concerning tunnelling and groundwater flow as well as potential contamination. Please see our response set out under our para. 2.2, above.

5.2. At **paragraph 6.4.4** of REP7-021, the Alliance states:

“If the crown of the tunnel is located below the Stockbridge Rock in Stonehenge Bottom, i.e. at approx. 25m BGL (55mAOD), with the road level in the tunnel at 36.3m AOD, the tunnel would be approximately 15m deeper than is currently shown in Highways England drawings. The current levels shown in the drawings (HEng. DCO Application: Documents 2.7- Engineering Section Drawings; No.7 of 24 [App-010]) show the crown level of the tunnel below Stonehenge Bottom at 70m AOD, and the road level at 51.3mAOD.”

These levels are more clearly shown in Application Document 2.16 – Bored Tunnel Limits of Tunnel Deviation Plan (APP- 019). https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010025/TR010025-000171-2-16-Tunnel_LOD_Plan.pdf

5.3. Highways England’s section drawing “Chalk Stratigraphy with Tunnel and Chalk Rock Elevations (adapted from Mortimore (2012))” is reproduced below for easier reference. The drawing appears as Figure 2 in Highways England Deadline 3 Submission - 8.23 – Implications of 2018 Ground Investigations to the Groundwater Risk Assessment (REP3-018).

Figure 2 Chalk Stratigraphy with Tunnel and Chalk Rock Elevations (adapted from Mortimore 2012)

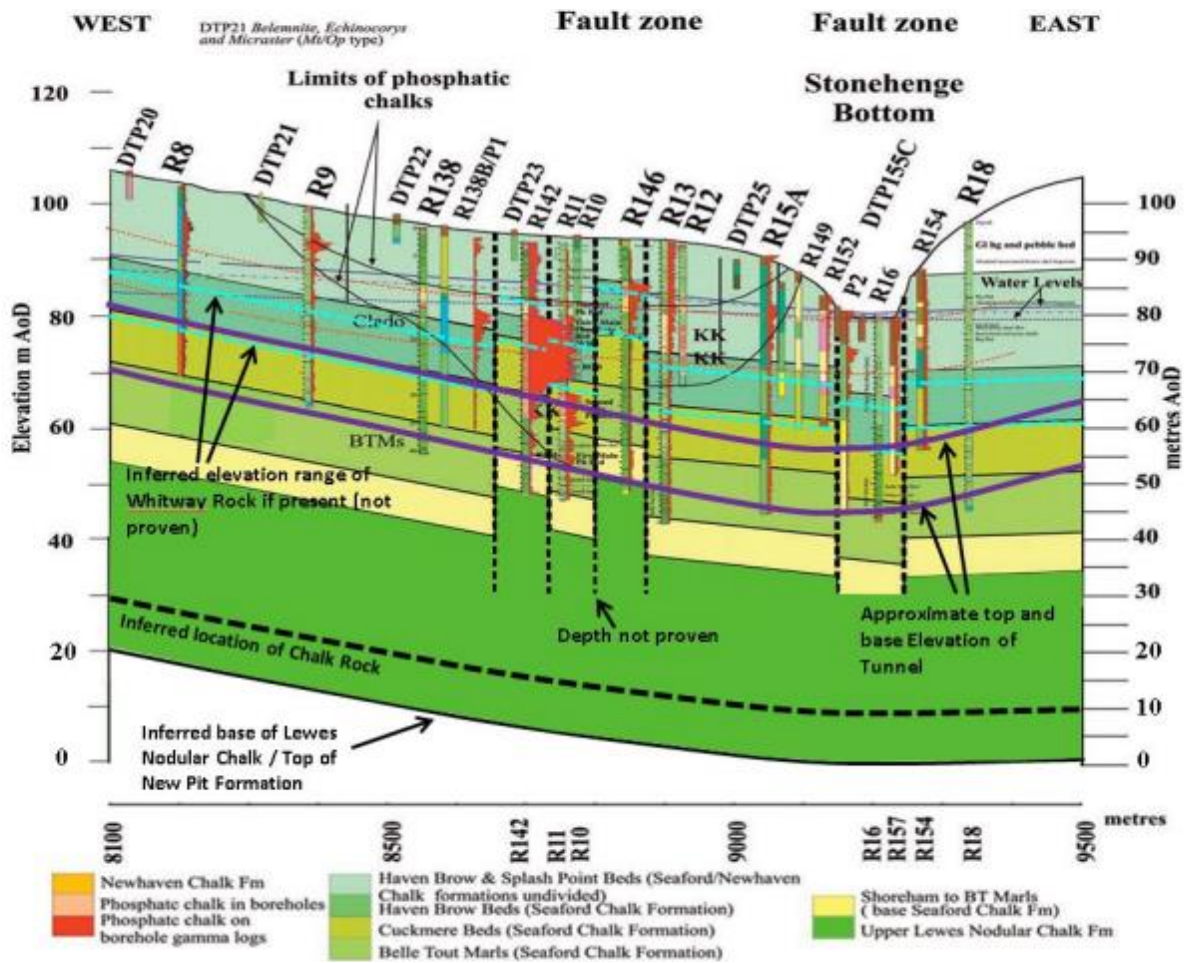


Fig.2 from Highways England REP3-018

5.2. Paragraphs 6.4.8–11. Tranquillity

The Alliance’s views as expressed by Clive Bentley remain unchanged.

5.3. Paragraphs 6.4.12–14. Objectivity of statutory bodies and expertise

Our observations were intended to be factual unless stated otherwise. Highways England refutes a number of our concerns but fails to be specific, for example, on the expertise of HMAG members that might exceed that of members of the Scientific Committee specifically set up to advise them. As Professor Parker Pearson indicated at ISH 8, the majority of the Scientific Committee are opposed to the Scheme as it stands.

We understand that the HIA for the Stonehenge visitor centre was undertaken by Chris Blandford Associates.

Archaeologists with relevant expertise were employed by Highways England to undertake the HIA for the Scheme and elsewhere in the WHS but, while we do not accept that the HIA meets the

requirements of ICOMOS, UNESCO and UK planning policy, this is not relevant to the question asked by the ExA.

5.4. Paragraphs 6.4.17–21, concerning the risks of vibration and settlement

The Stonehenge Alliance’s views remain unchanged. Discussion at ISH 8 served to underline our concerns re the lack of tried and tested methods of monitoring for vibration and settlement and prevention of damage from them to archaeology. We share the concerns raised by specialist Alan Baxter for ICOMOS-UK at Deadline 6 (REP6-055) about the potential impacts of tunnelling, possibly including collapse, in the longer term, which have simply not been addressed by Highways England. Indeed, as Alan Baxter says, “We must be aware of our technical limitations. We do not know and maybe never will, enough.”