



A303 Amesbury to Berwick Down

TR010025

Deadline 4

**8.30.6 - Written summaries of oral submissions put at
Traffic and Transport hearing on 13th June 2019**

APFP Regulation 5(2)(q)

Planning Act 2008

The Infrastructure Planning (Examination Procedure) Rules 2010

June 2019

Infrastructure Planning

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A303 Amesbury to Berwick Down

Development Consent Order 20[**]

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Introduction

- 3.1.1 This note summarises the submissions made by Highways England ("**the Applicant**") at the Traffic and Transportation Issue Specific Hearing held on 13 June 2019 ("**the Hearing**") in relation to the Applicant's application for development consent for the A303 Amesbury to Berwick Down project ("**the Scheme**").
- 3.1.2 Where the Examining Authority ("**the ExA**") requested further information from the Applicant on particular matters, or the Applicant undertook to provide further information during the hearing, the Applicant's response is set out in or appended to this document. This document does not purport to summarise the oral submissions of parties other than the Applicant, and summaries of submissions made by other parties are only included where necessary in order to give context to the Applicant's submissions in response, or where the Applicant agreed with the submissions of another party and so made no further submissions itself (this document notes where that is the case).
- 3.1.3 The structure of this document follows the order of items published by the Examining Authority ("**the ExA**") on 31 May 2019 ('**the Agenda**'). Numbered agenda items referred to are references to the numbered items in the Agenda. The Applicant's substantive oral submissions commenced at item 3 of the agenda, therefore this note does not cover items 1 and 2 on the agenda which were procedural and administrative in nature.

Written summary of the Applicant's oral submissions

3 METHODOLOGY AND MODELLING	
<u>Agenda Item</u>	<u>Highways England response</u>
3.1 Reliability and validation of the local transport model - A303 Stonehenge South West Regional Traffic Model (SWRTM).	<p>Mr Paul Hanson, on behalf of the Applicant, explained that the Applicant's response to First Written Question Tr 1.5 [REP2-036] provides a summary of the development of the transport model for the Scheme, with further detail provided in the COMMA documentation [APP-298- APP-301]. He confirmed that the model has been subject to independent scrutiny by the Applicant, the Department for Transport ('DfT'), the Treasury and Wiltshire Council, who all consider that it is acceptable. In line with the NPSNN paragraphs 4.6 and 4.7, the model has been developed in line with WebTAG guidance.</p> <p>In response to a question from the ExA, Mr Hanson confirmed that the local model was developed from the South West regional models developed in 2016 and 2017, which were developed to provide a basis for consequential scheme models. The SW regional model is a representation of transport modelling from Basingstoke to Cornwall including some of the M4. It fully represents strategic route options. The defined area of detailed modelling identifies where impacts may be material and the local model was refined and calibrated in this local area through the use of locally collected data.</p> <p>Paul Brown QC, on behalf of Wiltshire Council, confirmed that Wiltshire Council was in agreement with the local traffic model and how it had been developed.</p> <p>Dr Simon Temple, on behalf of the Stonehenge Alliance ('SHA'), stated that SHA has two concerns in respect of the model:</p> <ol style="list-style-type: none"> 1. That the extent of detailed modelling is not sufficient, in particular that it does not explicitly model congestion on the M3 east of Basingstoke, which accesses the A303 and therefore does not pick up the choices drivers make coming to the SW from London, in particular whether they choose to use the M3 or the M4. Given that congestion is predicted in 2020 on the M3, this is an important choice variable that has not been modelled. <p>In response Mr Hanson indicated that the section of road being discussed by SHA is approximately 50 miles east of the Scheme and is in any event of minimum relevance given that only a small proportion of traffic on the A303 originates from the M25. Consideration has been given to roads and flows outside the models, in a proportionate manner in accordance with guidance.</p> <ol style="list-style-type: none"> 2. That Interested Parties have not been able to see evidence of how the variable demand model for the Scheme has been calibrated. <p>In response Mr Hanson explained that all modelling and calibration has been done in accordance with DfT guidance, including in relation to sensitivity testing.</p>

In respect of both matters, **Mr Hanson** indicated that more information on these matters would be provided in writing following the Hearing. Such information is set out below:

Extent of Modelling

Paragraphs 16.4.36 – 16.4.41 of **the Applicant's Comments on Written Representations** [REP3-013] respond directly to Stonehenge Alliance's allegation that simplified modelling of the M3 is a matter of concern, explaining that appropriate and proportionate assumptions based on DfT national modelling were applied to represent changes in speed from future congestion.

The eastern boundary of both the South West Regional Traffic Model and the A303 Stonehenge SWRTM (DCO) models extend to the M3 Junction 4 near Frimley. This is approximately 50 miles away from the Scheme in terms of highway travel distance. Nearly a third of the traffic using the Amesbury to Berwick Down section of the A303 also travels along the M3 east of Farnborough. 20% of the A303 traffic accesses the M3 from the north and east and 12% from routes to the south-east of the M3.

Currently the journey time using this section of the M3 (from Junction 4 near Frimley to Junction 2 near Thrope Green) is around 12 minutes for most of the day. Congestion typically adds up to 5 minutes to travel times at around 8am eastbound and 5pm westbound on weekdays

For the 12% of A303 traffic routing to or from the south-east of the M3, the route using the A303 is typically about 20 minutes faster than the more extended journey using the M4 / M5 to the point where the routes combine on the M5 near Exeter. The uncertainty from the simplified method of representing journey time for vehicles using this section of the M3 section is too small for there to be significant rerouting to the M4 / M5.

This leaves approximately 20% of A303 traffic which routes north-east of the M3. For these trips the difference in journey time between the M4 and the A303 routes is smaller and the routing may be sensitive to uncertainty in the accuracy with which journey time on the M3 near the M25 is represented.

Congestion on the M3 near the M25 is associated with peak hour weekday commuter travel times. This congestion occurs at approximately 7:30am – 9:00am heading east and 5:00pm – 7:00pm heading west. About 10% of traffic using the A303 near the scheme occurs at relevant times of day. The implication is that only 10% of the 20% of traffic using the M3 section in question could currently be affected by uncertainty in the accuracy with which congestion is represented; that is 2% of the traffic using the A303 Amesbury to Berwick Down section.

In conclusion, the methods applied by the Applicant do correctly represent congestion on the network in the external area. The method is simplified and subject to some uncertainty. However, only approximately 2% of daily traffic using the A303 near the scheme could be affected by this source of forecasting uncertainty. This is well within the bounds of acceptable forecasting uncertainty and is unlikely to have any material impact upon the conclusions that can be drawn from the modelling work which has been undertaken. The approach taken to represent congestion on the M3 east of Farnborough is, accordingly, proportionate and appropriate.

	<p><u>Variable Demand Modelling</u></p> <p>The Variable Demand Modelling (VDM) undertaken for the A303 Amesbury to Berwick Down appraisal used the DfT's standard VDM software package DIADEM (Dynamic Integrated Assignment and Demand Modelling). DIADEM is identified in WebTAG unit M2 as an appropriate tool for this purpose and WebTAG unit M2 provides a detailed specification of the functions applied.</p> <p>All five Highways England Regional Traffic Models (RTMs) utilise DIADEM ensuring appropriate use in scheme appraisal. The SWRTM, along with the other RTMs, has been approved by the Applicant for use in the strategic level assessment. As explained in the model development package [APP-300 paragraph 2.4.5], the VDM element of the A303 Amesbury to Berwick Down appraisal was developed from the standard SWRTM VDM.</p> <p>Development and calibration of the RTM Variable Demand Models involved collaborative working across the industry. It applied guidance on choice model structure set out in WebTAG M2 section 4.5. The median coefficient values set out in WebTAG M2 Tables 5.1 and 5.2 were adopted following guidance on model calibration in WebTAG M2 Section 5.6. Cost damping was applied using the relationships and parameters set out in sections 3.3.6 to 3.3.15 of WebTAG M2. In developing the Regional Transport Models this approach was demonstrated to be appropriate through realism testing. The SWRTM demonstrated sensible outturn elasticities from realism testing, which compared well with published sources.</p> <p>Realism tests were undertaken, following guidance given in WebTAG Unit M2, which demonstrated that the VDM response for the 'A303 Stonehenge SWRTM (DCO)' model was not materially different to the satisfactory response and sensitivity of the standard SWRTM. Therefore further re-calibration of the standard VDM parameters developed for the SWRTM would not be appropriate. This is demonstrated in Chapter 12 of the Transport Model Package [APP-300].</p> <p>The model formulation, parameters and calibration are compliant with WebTAG M2 using standard parameters published in guidance. Realism testing was undertaken in accordance with guidance. The sensitivity is demonstrated through this realism testing to be suitable.</p>
3.2 Reliability of traffic forecasts including predictions for annual average daytime traffic (AADT) growth on A303.	<p>In response to queries from the ExA as to what influences the growth that affects the traffic model, Mr Hanson explained that traffic growth is predicted to be approximately 1% per annum on strategic roads, which is reflective of DfT regional forecasts. He went on to say that it is made up of population change and the DfT's economic assumptions wherein the increased efficiency and subsequent affordability of private car travel is forecast, along with the resultant stimulation of longer journeys. He confirmed that growth on the A303 west of Stonehenge is currently constrained by congestion, and that the Transport Assessment has considered induced traffic that may arise from the Scheme. Mr Hanson indicated that more information on these matters would be provided in writing following the Hearing. Such information is set out below:</p> <p>The sources of growth in the traffic forecasts reflect forecast changes in population and in the cost of travel by car. The assumptions underlying these changes are drawn from national datasets, including the Department for Transport's National Trip End Model (NTEM) and its Web-based Transport Analysis Guidance (WebTAG) databook.</p>

- Combined Modelling and Appraisal Report (ComMA) Appendix C: The Traffic Forecasting Package [APP- 301], sets out in Table 4-6 forecast growth in households in Wiltshire and the Test Valley district respectively at 7% and 11% between 2017 and 2026. These growth forecasts are based on the DfT's NTEM dataset, as set out in WebTAG unit M4 guidance.
- Travel cost assumptions are reported in Table 4-8 of the Traffic Forecasting Package [APP-301]. In this case the perceived cost of travel is the difference between the assumed operating cost (expressed as Pence Per Kilometre (PPK) in this table) and the value of time (expressed as Pence Per Minute (PPM) in the same table). Taking interpeak (IP) other travel to illustrate, the cost per kilometre is expected to reduce by 4.4% (5.61/5.87) between 2017 and 2026. The value of time is forecast to increase by 9.7% (16.55/15.08) between 2017 and 2026. In combination this implies a perceived reduction in car travel cost of 12.5% The transport model Package [APP-301] sets out realism test results in Table 12-1, showing a fuel price elasticity of -0.36. Applying this elasticity to the perceived fuel price change implies a change in traffic of about 4%.

These drivers both combine to drive growth in traffic across the whole road network, with the growth in housing having about twice the scale of change to that from price and income related change.

In addition to the area wide trends, the effect of army rebasing on traffic in the local area is also represented in the traffic forecasts as explained in Section 4.6 [APP-301]; these impacts are over-and-above the growth typically captured in DfT's NTEM forecasts. This does influence traffic forecasts in the immediate vicinity as illustrated in Table 5-6 which shows growth in trip ends of 27-28% for the Area of Detailed Modelling (AoDM) between 2017 and 2026, relative to the 10% across the entire South West. It should be noted that this effect is reduced over time, as the Army re-basing programme is due to complete by 2026.

The A303 capacity is constrained by the single lane section between Amesbury and Berwick Down. The increase in traffic forecast from rerouting and induced demand is discussed in section 5.4.6-5.4.15 of the traffic forecasting package [APP-301]. Analysis presented in Table 5-16 shows an increase in traffic of 1.1% across a screenline (i.e. not the effects of re-routing) in 2026 as a result of the scheme, highlighting a small component of induced demand.

Prof. Phil Goodwin on behalf of SHA, raised a concern that since 2015, DfT has radically changed how it deals with certainty - moving from confident assertions to instead being based on various 'scenarios'. For this Scheme, the old model has been used with a limited range of sensitivity tests. He therefore posited that whilst the Applicant had followed the letter of WebTAG; it has not followed the spirit of the approach of what DfT has done, noting that in December 2018, DfT said that it expected schemes to consider variability in forecasting. In response Mr. **Reuben Taylor QC, on behalf of the Applicant** explained that the modelling for the Scheme is fully compliant with WebTAG and is agreed by Wiltshire Council – this is what is required.

Mr Chris Gillham suggested that the Applicant has not taken account of the climate emergency announced, and commitment to net zero carbon emissions by 2050 made by the Government in recent months. **Reuben Taylor QC, on behalf of the Applicant** explained that climate change and greenhouse gas emissions resulting from changed traffic flows caused by the Scheme has been considered in chapter 14 of the Environmental Statement [APP-052].

	<p>Mr Harrison, on behalf of the Heart of the South West Local Enterprise Partnership raised a concern that the Uncertainty Log which informs the traffic modelling does not include the full planned improvements for the A303 corridor, meaning that the transport and economic results for past 2030 are likely to be underestimates. Mr. Taylor QC confirmed that there is not yet a full commitment by the Government to update the whole of the A303 corridor. As such, the Environmental Statement and Transport Assessment have assessed the impacts of the Scheme in front of the ExA and the relevant cumulative developments as required by WebTAG, PINS Advice Note 17 and the National Policy Statement for National Networks (NPSNN).</p> <p>Mr Nicholson, on behalf of himself and Cycling UK raised his concern that pedal cycle figures have not been considered in the traffic assessments which is important given that the Scheme could release suppressed demand leading to potentially different requirements for facilities within the Scheme. Mr. Taylor QC confirmed that this is the case, as it is not required by WebTAG or guidance. In any event, sufficient provision for cyclists has been included in the Scheme.</p> <p>Mr. Nicholson and Mr Barry Garwood both raised a concern that the Scheme had not adequately considered induced traffic. Mr. Taylor QC explained that a careful appraisal of such issues has been carried out, as set out in Table 5.16 of the COMMA Appendix C [APP-301] and explained in paragraph 16.4.35 of the Applicant's Comments on Written Representations [REP3-013].</p>
3.3 Frequency of busy days and profile/ extent of time savings.	<p>Dr Temple and Chris Todd, on behalf of the SHA, noted their view that the Scheme only solves summer peak issues and that it does not have a large overall effect on longer journey times and that the Applicant's methods for assessment may overestimate the effect of the Scheme as they compare drops in speed from the fastest day of the year to represent delay. It was also noted that the long delays appeared to be based on a small data set without more comprehensive information being available throughout the year.</p> <p>Mr Hanson, on behalf of the Applicant, explained that delay data has been derived from utilising TrafficMaster data, which uses a small sample size of mapping journey times every hour of every day. This was supplemented by ANPR data from 2015/2016 and 2017 which also considered how traffic diverts away when the A303 is congested. Combined, these data demonstrate that there are periods of extreme delay in peak times of at least an hour during busy days. The data also demonstrates that delays are spread across the year but it is acknowledged that there are days when there is little congestion on the A303.</p> <p>He went on to explain that presentation of the distribution of delays uses observations of journey times related to free-flow conditions and follow the pattern of delay as traffic increases. In many transport schemes in urban areas, congestion is considered around peak hours (morning and evening) – considering these in terms of the number hours in the year, this is several hundred hours where there is congestion during the year. This is comparable to the number of hours of congestion experienced on the A303 throughout the year - there is severe delay on the road and it is a problem.</p> <p>In response to a query from the ExA, Mr Hanson, noted that on 260 days a year the average delays experienced on the A303 relative to the fastest day is less than 5 minutes but there will be times during that day where the delay will be longer. For 100 days the average delay is longer than 5 minutes. There are hours within the day when much longer delays are experienced. Further detail is set out in Figure 4.7 of the Traffic Forecasting Package [APP – 301] which illustrates how the variation in delay has been appropriately represented between neutral and busy days in the transport model. Table 5-18 and 5-19 of the traffic forecasting package [APP-301] set out the forecast journey time changes along the A303 arising from the Scheme.</p>

	<p>Mr Rhind Tutt explained that a 2016 Chamber of Commerce Survey indicated that 91% of business travel was impacted by roads other than the A303 i.e. occurring on other A roads around Salisbury, which needs to be set in the context of the 8 minute average journey saving created by the Scheme.</p> <p>Mr Taylor QC responded to SHA and Mr Rhind-Tutt on behalf of the Applicant and urged the ExA to treat with caution the assertions of those who seek to downplay existing traffic problems on the A303. It is clear to see from the evidence that there is an issue with traffic on the A303 (as elucidated during the Hearing by Janice Hassett on behalf of Stonehenge Traffic Action Group). The traffic impacts and how the Scheme addresses them must be seen in terms of the consequential benefits provided, as set out in section 5.2 and 5.3 of the Case for the Scheme [APP-294]: providing high capacity, reducing journey times (especially in periods of high demand), providing more reliable journeys, reduced congestion and safety issues; reduced rat running; and supporting economic growth and improved economic activity, including local and regional tourism.</p>
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4 PUBLIC RIGHTS OF WAY

<u>Agenda Item</u>	<u>Highways England response</u>
<p>4.1 SLAN3 - suggested need for safe crossing of A303 at western end of scheme at Yarnbury Castle.</p> <p>4.2 Proposed new restricted byway with agricultural access to tie in with SLAN3 north of the A303 [APP-009, Ref B].</p> <p>4.3 Need for and location of Green Bridge 1.</p> <p>4.4 Proposed new route, part byway open to all traffic (BOAT) and part restricted byway along the southern side of the A303 to tie in with SLAN3 [APP-009, Refs A and D].</p>	<p>These items were considered together at the Hearing, as Mrs Louise Staples, on behalf of the NFU, Mr Martin Smith on behalf of the Whiting Family and Mr Robin Parsons all queried why the crossing at SLAN3 could not have been improved instead of providing the two restricted byways and Green Bridge 1, which will have an effect on agricultural land.</p> <p>Gill Anlezark, on behalf of the Cycling Opportunities Group for Salisbury (COGS) and Ms Myra Bennett, on behalf of the British Horse Society indicated their view that there is suppressed demand at this crossing point and that absent changes to the SLAN3 crossing, horses and cycles would use Green Bridge 1. Richard Broadhead, on behalf of Wiltshire Council expressed similar sentiments but, having discussed this matter with the Applicant, understand why improvements to the SLAN3 crossing are not proposed.</p> <p>As summarised by Mr Harper, on behalf of the Applicant, and expanded in the Applicant's responses to questions TR1.20, TR1.26, Ag 1.7, AL 1.21, CH 1.56 and the responses to the written representations of the aforementioned parties, the proposals to not improve the SLAN3 crossing and instead provide Green Bridge 1 and restricted byways on either side of the A303 have been brought forward for the following reasons:</p> <p><u>Consideration of SLAN3</u></p> <ul style="list-style-type: none"> • The recorded use of the byway crossing averages 11.2 users per day in both directions. This includes all classes (vehicles and NMUs) per day, but excludes vehicles pulling off the A303 to park illegally, then returning to A303. • The existing accident record at this location does not indicate a need for intervention. There are no recorded accidents involving non-motorised users at the SLAN3 crossing of A303 at Yarnbury Castle. There was one accident recorded at this crossing between 2007 and 2016 - this involved a car and an HGV with one slight injury to the car driver.

- Traffic speeds at the crossing are expected to be as existing for cars and light good vehicles as the diverge from single to dual carriageway, where west-bound traffic speeds will increase, occurs almost 1km (980m) to the east of the byway crossing. Traffic speeds for heavily loaded HGVs are expected to increase slightly as the approach gradient is lower than existing, but this is not anticipated to significantly increase the risk to crossing users.
- A grade-separated crossing either as an overbridge or an underpass would require significant earthworks to be constructed either side of the A303 to accommodate the approach ramps, furthermore:
 - An overbridge would create visual intrusion on the sky line and have a negative impact on the setting of the scheduled monument at Yarnbury Castle.
 - An underpass option would have significant buildability constraints underneath a live dual carriageway and would create impacts on the setting of Yarnbury Castle.
 - The level of use would not justify the significant expense of providing a grade-separated crossing and alternative routes on the Scheme would be available with less physical and environmental intrusion. These two options were therefore discounted.
- A third option of closing the crossing with restricted access/egress to/from the A303 was also considered. This option was discounted due to the absence of alternative byway routes to Chitterne (to the north of A303) and Stapleford (to the south).

Need for north side byway

- This route provides a route for non-motorised users (NMUs) from Winterbourne Stoke and the existing A303 near Scotland Lodge via Green Bridge No.1 to byway SLAN3 near Yarnbury Castle and northwards towards Chitterne and Tilshead. It also provides an alternative for NMUs on byway SLAN3 who do not wish to use the existing crossing of the A303.
- The restricted byway along the north side of the A303 is required to provide access to agricultural land where existing accesses from A303 are being stopped up. (See PMA refs a and b on Sheet 2 of the RoWA Plans [APP-009] and DCO Schedule 3 [APP-020]). This route would be thus required even if a new crossing was provided at Yarnbury Castle.

Need for south side byway

- The section of this route to the east of BSJA3, together with the upgrade of bridleway BSJA3, is required to preserve a continuous Byway Open to All Traffic (BOAT) link between Winterbourne Stoke and Berwick St James.
- Highways England's Cycling Strategy requires the provision of off-road cycle routes parallel to new trunk roads as set out in Interim Advice Note (IAN) 195/16.

Need for Green Bridge 1

	<ul style="list-style-type: none"> • The presence of the bridge provides an opportunity to provide a crossing of the proposed A303 for the restricted byway, thus providing connectivity for cyclists as required by Highways England's Cycling Strategy and Interim Advice Note (IAN) 195/16 as set out in 4.2 above. It also provides for agricultural access to the north of the proposed A303 from the existing A303. • Routing the right of way and agricultural access over Green Bridge No.1 is preferred because the alternative via the B3083 would be a 1.3km longer detour for users of Byway SLAN3 seeking to cross the A303 and avoid the existing crossing at Yarnbury. • Furthermore, Green Bridge 1 is intended to perform a number of environmental mitigation and enhancement functions. It is not being proposed solely as mitigation for the severance of an existing bat commuting corridor by the Scheme. The bridge has been located in close proximity to the Site of Special Scientific Interest (SSSI) that will act as a source to aid dispersal of flora and fauna species associated with chalk grassland habitats. • The proposed bridge location is at a point where the cutting depth of the proposed A303 allows for the necessary road clearance without being prominent within the landscape while minimising the construction footprint. • If the bridge was located to the east of the current location (e.g. closer to Scotland Lodge), then the bridge would cross over a progressively shallower cutting the closer it was moved towards the existing field boundary (where bats have been recorded), resulting in additional construction footprint, including loss of woodland at Scotland Lodge. This would also move it further from the chalk grassland source habitat within the SSSI, reducing the connectivity for chalk grassland flora and fauna species. • Similarly, if the bridge was to be located further west, as the proposed A303 moves into a shallower cutting, the bridge would require more land-take and fill to achieve the necessary clearance, increasing as the bridge moves west. This would also require more extensive woodland planting to link the green bridge and the existing bat crossing zone, which would encroach on the grassland interface between the SSSI and the Scheme, reducing the connectivity. • Given the land-take requirements of the cutting, the proposed location of this green bridge represents an efficient use of land to be permanently acquired for construction of the Scheme. It also allows the bridge to be integrated into the local landscape and will provide micro-climates / suitably sheltered habitat to aid the dispersal of a range of species. <p>In conclusion, therefore, a crossing of SLAN3 is not feasible, and there is a clear and justified need for both byways either side of the A303 and Green Bridge 1.</p>
4.5 New BOAT to tie in with WST06B and need for/ location of Green Bridge 2 [APP-009, Ref F].	<p>This item was not discussed in detail at the hearing. Mr Taylor QC, on behalf of the Applicant noted that Green Bridge 2 was located where it is to maintain the continuity of existing byways as well as the existing rural character and appearance of the landscape.</p> <p>Myra Bennett, on behalf of the British Horse Society, raised a general concern about the junction of the BOAT that crossed Green Bridge 2 in Rollestoe. Mr Taylor QC confirmed in response that the Scheme does not affect the arrangements at either end of the byway.</p>

<p>4.6 Proposed new bridleway from Winterbourne Stoke to Longbarrow junction, north of existing A303 and continuation to connect with restricted byway within the World Heritage Site via Green Bridge 4 [APP-009, Refs Y and Z].</p>	<p>At the Hearing, Mrs Staples, on behalf of the NFU, queried why a new bridleway is required at this location, taking agricultural land, noting in particular that the new route does not replace an existing bridleway. As summarised by Mr Harper, on behalf of the Applicant, and expanded here, the new bridleway is required for the following reasons:</p> <ul style="list-style-type: none"> • An alternative to the bridleway alignment to the south was considered but would require an area of some woodland and scrub to be removed and would involve additional earthworks. Whilst feasible this area would remove the bat foraging habitat and following an assessment of the environmental effects it was concluded that the northern route was preferable. This northern route was endorsed at the Walking Cycling and Horse Riding Workshop in July 2018. • It is being provided to facilitate, to the east, a link to the existing north-south byway route WSTO6A and WSTO6B and the proposed bridleway between Longbarrow and the restricted byway network in the World Heritage Site. To the west the route will provide a route along what will become a quiet road through Winterbourne Stoke to Byways Open to All Traffic WSTO4 and WSTO3 and beyond to the proposed restricted byways to link with BSJA3 and SLAN3 at Yarnbury Castle. This strategy is supported by Wiltshire Council. • Whilst east of the tie-in of the existing A303 to the new link road, there is sufficient room within the highway boundary to facilitate allowing equestrians to use the verge parallel with the shared-use cycleway to Longbarrow Junction; there is not such room to the west of this, requiring a separate route to be provided. • This is because the western end of the bridleway is situated east of the River Till at the point where the proposed speed limits will increase from 30mph to 40mph for eastbound traffic. From this point for a distance of 825 metres to the east there is insufficient width between the existing hedge and the edge of carriageway to accommodate a shared use route suitable for pedestrians, cyclists and equestrians. While the existing A303 carriageway could be reduced in width by up to a metre to reflect its change in status, this would still not provide sufficient width. • The Design Manual for Roads and Bridges Technical Advice note TA 91/05 Provision for Non-Motorised Users states “where practicable, equestrians should be routed away from the immediate vicinity of roads” (Cl. 2.15) and TA90/05 The Geometric Design of Pedestrian, Cycle and Equestrian Routes states that “For routes used by equestrians, the separation of the route from the carriageway should be a preferred minimum of 1.8m.” (Cl. 7.23), which would not be able to be provided at this location. • An alternative of removing the hedge to widen the highway instead would also not be palatable: <ul style="list-style-type: none"> ◦ If the existing hedge is removed and the bridleway placed closer to the existing A303, the agricultural land area required is ~700 square metres with a loss of habitat including hedges, scrub and trees of ~5,900 square metres. By comparison, the draft Development Consent Order proposal requires ~4,400 square metres of agricultural land. ◦ The hedgerow along the north side of the A303 is used as a commuting route by several species of bats. This was shown in the surveys of bat activity reported in the Environmental Statement Appendix 8.17 [APP-258], Figures
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	<p>illustrating Transect 2 and Static detector 15. Bats which roost in and around Winterbourne Stoke are able to use this route along the A303 to byway WSTP6B which will lead to Green Bridge Two and continue east towards a double hedgerow near Longbarrow, which provides another north-south route for bats. Removal of the existing hedge would reduce the connectivity of the landscape for bats.</p> <ul style="list-style-type: none"> ○ The structure and composition of the hedgerow is described in the Hedgerow Survey Report, ES Appendix 8.5 [APP-240], in two sections, 3 and 8. Both sections are well-grown hedges with trees and several woody species, which further contribute to biodiversity, especially in an area which is largely in arable production. ○ The provision of a grass strip for equestrian use adjacent to the hedgerow would also provide complementary habitat for the hedgerow and some buffering from agricultural inputs on adjacent land. This provision would be beneficial for invertebrates. ○ Retaining the existing hedge in place will improve the amenity for bridleway users. ○ The existing field margin would require less earthworks to achieve the appropriate cross-fall for the bridleway. <p>Ultimately, the Applicant wishes to ensure that the Scheme is integrated within the existing public rights of way network and, where the opportunity exists, create legacy benefits for non-motorised users in accordance with its Strategic Business Plan and Roads Investment Strategy. These are aligned with Government policy to encourage walking, cycling & horse-riding through national (e.g. NPSNN para 3.16) and local policies and plans. Bridleway Z will provide a key off-road route for non-motorised users travelling east and west with links to existing north-south routes, providing legacy benefits to non-motorised users.</p>
4.7 Crossing arrangements for non-motorised users (NMUs) at Longbarrow junction.	<p>At the Hearing, the British Horse Society, Cycling UK, COGS and Wiltshire Council raised concerns as to how the design of this crossing will be finalised; all noting that separate provision would need to be provided for equestrians, and as to how the junction would perform with the signalised crossing in place. As summarised at the Hearing by Mr Harper, on behalf of the Applicant:</p> <ul style="list-style-type: none"> ● The precise form of non-motorised user (NMU) crossing will be confirmed during detailed design; at this stage it is anticipated that this will be facilitated through the use of Pegasus crossings (signal-controlled crossings adapted for both pedestrian and equestrian use). The Pegasus crossing signals will be integrated with the traffic control signals to ensure the safety of all users. The detailed design will be discussed with Wiltshire Council pursuant to the agreement envisaged to be entered into with them. ● Pegasus crossings are widely used and are endorsed by the British Horse Society in their "Advice on Road crossings for horses" which states "A Pegasus crossing is a means of creating a relatively safe means of crossing at grade, which is cheaper and more practical on existing roads, and some new developments, than building an underpass or overpass. However, where new roads are planned, the British Horse Society recommends the use of an underpass as the first choice of crossing if feasible." ● The signal controlled southern roundabout will ensure safe use of the junction and provide safe crossing of the A360 (south) for non-motorised users. The proposal to include traffic lights will make the stop lines more prominent for road users and will combat the potential conflict with Walkers, Cyclists, and Horse Riders (WCHs) and slow-moving vehicles. This will enhance the safety of WCHs and road users and mitigate against the risk of road collisions at the junction.

	<ul style="list-style-type: none"> • The traffic lights will only be used when there is a requirement for a WCH to cross the road and therefore they will not be in use continuously. The phasing of the signals will be designed to ensure the NMU demand does not cause significant queuing at the junction and will be agreed with Wiltshire Council as local highway authority. The traffic lights design, which could be used during the day and night, will also be determined in the detailed design stage of the scheme with Wiltshire Council. Due to the design of the junction, and in order to allow safe crossing for WCHs, it is likely the crossing will be located in advance of the actual roundabout • Design commitment D-CH29 of the Deadline 3 OEMP sets out that the traffic signals at Longbarrow junction shall have shrouds or louvres to direct the signals towards the intended user and minimise light spill. • Alternative crossing facilities have been considered for the new A360 and the link to the existing A303 located at the Longbarrow southern roundabout. • A Green Bridge crossing south of the Longbarrow southern roundabout was discounted primarily due to visual intrusion on the landscape as it is required to be suitably raised above the A360 carriageway to provide the necessary headroom. • The A360 southern link to Longbarrow junction is in cutting to minimise its visual impact on the adjacent World Heritage Site. An underpass has been discounted due to the potential flood risk, the difficulty of providing it in a cutting and the length of approach ramps required to accommodate a 3.4m minimum height for horse riders. <p>Mr Taylor QC also added, following comments by Mr Nicholson and Mr Upfold, that paragraph 3.317 of the NPSNN requires the use of reasonable endeavours to address the needs of cyclists and pedestrians. The scheme provided an alternative route for cyclists that meets that objective. The surface for rights of way is addressed in the OEMP ref P-PROW1 which requires that a surface appropriate to the user will be used. The safety of all road users, including cyclists is a primary concern for Highways England and this will be part of the design and will be supported by the existing arrangements for road safety audits.</p>
4.8 Siting of Green Bridge 4	<p>Criticisms were raised on the approach by Ms Staples, on behalf of the NFU and Mr Chris Todd on behalf of the SHA, who noted that they could see no reason why the green bridge could not be on the line of the A360.</p> <p>Mr Taylor QC, on behalf of the Applicant, noted that this point has been answered in the responses to written questions in Ag.1.7, Al.1.21 and CH.1.56 [REP02-037] which set out the following points:</p> <ul style="list-style-type: none"> • Green Bridge No. 4 was moved eastwards and widened from 50m to approximately 150m, from the position shown during the statutory consultation, in order to provide greater physical and visual connectivity between the Winterbourne Stoke Crossroads Barrows and the Diamond Group and, in particular, the two upstanding long barrows in each group in this western part of the WHS. The retained cutting in the western approaches allows visual connectivity to be maintained between the Winterbourne Stoke Crossroads Barrows, the Diamond Group and the Normanton Down Barrows that contribute to the OUV of the WHS, as agreed with heritage stakeholders.

	<ul style="list-style-type: none"> • Highways England has committed, via the Outline Environmental Management Plan (OEMP) [APP-187] (a revised version of which was submitted at Deadline 3) ref D-CH4, to the width of Green Bridge No. 4 being approximately 150 metres. • The updated OEMP also contains additional design commitments and design principles to help guide the development of the detailed design together with a robust stakeholder consultation mechanism to involve heritage stakeholders, including Historic England, in the development of aspects of the detailed design within the World Heritage Site. Compliance with the OEMP is secured via requirement 4 of Schedule 2 of the draft Development Consent Order [REP2-003]. • The green bridges are designed to reduce their visual impact and to maintain or enhance landscape connectivity. Green Bridge Four has been relocated eastwards from its original position, and substantially lengthened, reconnecting the landscape containing the Diamond Group and Winterbourne Stoke Crossroads barrows in consultation with HMAG, thus allowing the physical and topographic landscape connection between the groups to be maintained. To further assist integration of Green Bridge Four, chalk grassland habitat would be created to tie in along the western approach, with the finished ground level of the bridge replicating existing ground levels as far as practicable. • The restricted byway along the existing A360 was re-routed following the statutory consultation to cross Green Bridge Four at its revised location. The byway is located in the centre of the bridge at the maximum distance from the parapets over the retained cutting, thus improving the amenity and safety for non-motorised users. • The location and scale was agreed with heritage stakeholders. The alignment of the proposed restricted byway necessarily utilises the land bridge to maintain connectivity and access for permitted users: the existing right of way along the A360 will be severed by the alignment of the A303 in cutting.
4.9 Omission of link for motorised users along route of existing A303 between AMES11 and AMES12 from Proposed Development. 4.10 Legal implications of turning AMES11 into a cul de sac for motorised users. 4.11 Whether the Development Consent Order should include a prohibition of driving order along the section	<p>The Applicant notes that there was an extensive discussion on these matters at the Hearing which dealt with both legal and substantive issues. In this note, the Applicant intends to deal with (a) the substantive issues, i.e. why the Applicant considers that its application proposals are justified, responding to the criticisms and suggestions of Wiltshire Council and the Trail Riders Fellowship (TRF), and (b) the legal issues only in respect of the discussion which has culminated in the ExA's Procedural Decision of 19 June in respect of Wiltshire Council and TRF's proposed changes to the DCO for the Scheme.</p> <p>The Applicant's submissions in respect of items 4.10 - 4.12 as worded have been set out in its previous written submissions (and in relation to section 136 of the Planning Act 2008), namely the responses to FWQs TR 1.28 and 1.30, and its response to the Written Representations of Wiltshire Council, the TRF and the Green Lanes EAM and are therefore not repeated here.</p> <p>These submissions are based on the Applicant's summary understanding of the changes that are sought by the TRF and Wiltshire Council, further to their oral and written submissions:</p> <ul style="list-style-type: none"> • TRF wishes for the link between byways AMES 11 and AMES 12 to permit the use of motorcycles, which under the current proposals would not be possible as that link is proposed to be a restricted byway;

<p>of route between AMES11 and AMES12.</p> <p>4.12 Implications of these proposals for s130 of the Highways Act 1980, the Public Sector Equality Duty and paragraph 3.19 of the National Policy Statement for National Networks.</p>	<ul style="list-style-type: none"> Wiltshire Council wishes to impose a prohibition on motorised vehicles using Byways 11 and 12 and the restricted byway, save for emergency vehicles and motorcycles. <p>These changes should be seen in the context of the concern expressed by representatives of the spiritual community that members of the public would not be able to access or view Stonehenge without otherwise having to pay to use English Heritage facilities; and the expressed concerns of heritage stakeholders as to the potential effects of motorcycle use to the WHS and its OUV.</p> <p><u>Substantive Issues</u></p> <p>Mr Taylor QC and Mr Harper, on behalf of the Applicant, responded to the comments of Ned Westaway and James Higgs, on behalf of the TRF and Paul Brown QC, on behalf of Wiltshire Council, as follows:</p> <table border="1"> <thead> <tr> <th data-bbox="541 536 1320 605">Comment Made</th><th data-bbox="1320 536 2133 605">Applicant Response</th></tr> </thead> <tbody> <tr> <td data-bbox="541 605 1320 1324"> <p>TRF: Highways England claim that there is limited use of Byways 11 and 12 and that there is an alternative route via the A360 of around 5 miles. TRF consider that these points misunderstand the nature of countryside recreation and are contrary to evidence – Highways England has not put forward any evidence to justify the lack of usage argument. TRF have submitted 72 User forms. HE reference surveys from April 2018. Wiltshire Council evidence (TRF WR Appendix 8) shows regular use of the two byways. So there is evidence. There is also NPSNN policy basis for enhancing networks for all users, not providing a 5 mile diversion.</p> </td><td data-bbox="1320 605 2133 1324"> <p>The TRF's 72 user evidence forms provide details of use of both byways 11 and 12 and some include images. The data abstracted from these can be summarised as follows:</p> <ul style="list-style-type: none"> 49 members use the byways between 1 and 11 times a year with most (10) using them 5 times and 7 members each using them 3, 4 and 6 times a year 12 members use the byways monthly 11 members use them 18 or more times a year, up to "Multiple times per month", including 2 who use them weekly. <p>Highways England commissioned a traffic survey of the use of Byways 11 and 12 which was undertaken in June 2018. Summarised as follows:</p> <ul style="list-style-type: none"> Concurrent traffic counts were undertaken on the 1st, 2nd and 3rd of June 2018. On Byway 11, the survey recorded a range of 0 to 4 movements by motorcyclists per day northbound to the A303 and 2 to 11 movements by motorcyclists southbound from the A303 on Byway 12. </td></tr> </tbody> </table>	Comment Made	Applicant Response	<p>TRF: Highways England claim that there is limited use of Byways 11 and 12 and that there is an alternative route via the A360 of around 5 miles. TRF consider that these points misunderstand the nature of countryside recreation and are contrary to evidence – Highways England has not put forward any evidence to justify the lack of usage argument. TRF have submitted 72 User forms. HE reference surveys from April 2018. Wiltshire Council evidence (TRF WR Appendix 8) shows regular use of the two byways. So there is evidence. There is also NPSNN policy basis for enhancing networks for all users, not providing a 5 mile diversion.</p>	<p>The TRF's 72 user evidence forms provide details of use of both byways 11 and 12 and some include images. The data abstracted from these can be summarised as follows:</p> <ul style="list-style-type: none"> 49 members use the byways between 1 and 11 times a year with most (10) using them 5 times and 7 members each using them 3, 4 and 6 times a year 12 members use the byways monthly 11 members use them 18 or more times a year, up to "Multiple times per month", including 2 who use them weekly. <p>Highways England commissioned a traffic survey of the use of Byways 11 and 12 which was undertaken in June 2018. Summarised as follows:</p> <ul style="list-style-type: none"> Concurrent traffic counts were undertaken on the 1st, 2nd and 3rd of June 2018. On Byway 11, the survey recorded a range of 0 to 4 movements by motorcyclists per day northbound to the A303 and 2 to 11 movements by motorcyclists southbound from the A303 on Byway 12.
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		<ul style="list-style-type: none"> • On one of those survey days, no motorcyclists were recorded moving north of AMES11 to the A303 at all. • Over a 20-day period between the 1st and 20th June 2018 a total of 12 motorcycles were recorded travelling north to south and 13 travelling south to north on Byway 11. Even assuming that all of the motorcyclists heading north turned left and then left again into Byway 12, the largest number of people recorded in the traffic survey using the A303 to connect between the byways would be 4 in an entire day. • Highways England commissioned a further survey starting on 25th March 2019 and continuing until further notice: <ul style="list-style-type: none"> ○ A total of 9 motorcycles turned off A303 onto Byway 12 south-bound over a 26-day period between 25th March and 20th April 2019, an average of about one every 3 days. This is the manoeuvre that would be prevented if the link for motorcycles between Byways 11 and 12 was removed. <p>A total of 66 motorcycles travelled along Byway 11 over a 37-day period between 25th March and 1st May 2019, an average of less than 2 per day. Further analysis of the images is necessary to confirm whether these trips were two-way along Byway 11 or whether they used A303 for part of the trip.</p> <p>The Applicant therefore continues to maintain that there is limited use of the link between Byways 11 and 12 and the byways themselves.</p>
	<p>TRF: Highways England have set out in their comments on TRF's written representation that it is a Scheme aim to remove sight and sound of traffic from Stonehenge, however, the core objectives do not include that. TRF contends that there is no</p>	<p>It is noted that the NPSNN support for promoting sustainable transport at paragraph 3.16 is directed at active travel - cyclists and walking, not trail motorcycles.</p> <p>The reasons for the removal of the previously proposed link between Byways 11 and 12 are set out in chapter 3 of the ES</p>

	<p>assessment that there would in fact be a problem if trail riders were able to access the WHS.</p> <p>TRF's view is that there is nothing in the WHS Management Plan ('WHSMP') which actually says that there is an issue. OUV is affected by heavy road use with no mention of light trail rider use. Motorbikes do not cause an impact that needs to be reduced. In fact, the WHSMP references the fact motorcycles used byways as being there before the WHS was inscribed.</p> <p>Furthermore the closest link is the northern end of Byway 11 where Highways England's proposals will mean that the highway will be stopped up and a turning circle will actually mean more noise. TRF noted that Stonehenge and Normanton already have byways near them with little impact, so it is queried how much impact will actually be caused.</p>	<p>and in the Consultation Report. These documents explain that the Applicant has considered the full range of appropriate topics and concerns before determining that a link between the two byways is inappropriate.</p> <p>With respect of the WHS Management Plan, ICOMOS guidelines are clear that the Scheme must have been accompanied by a Heritage Impact Assessment, which itself must include an assessment of the Scheme against the WHSMP. Aim 6 of the WHSMP is stated to be a 'reduction in sight and sound of vehicles in the WHS', which plainly embraces motorcycles.</p> <p>The Applicant has therefore balanced a number of factors – the aims of WHSMP as noted above, potential impact of the loss of a link on users, the benefits of the loss of a link in terms of OUV and other heritage matters, and the consideration of other assessment disciplines, in bringing forward proposals which do not include a link between Byways 11 and 12.</p>
	<p>TRF: the 2005 and 2011 inquiry decisions were based on similar proposals, and they both discuss the need for highways proposals to not cause a loss of connectivity and indeed state that there would be an "illogicality" in not providing the link if they can use Byways 11 and 12. TRF contends that Highways England cannot argue that things have moved on since those decisions were made. As such, the DCO should not be made without the change.</p>	<p>The previous decisions were made in relation to a different Scheme than that which is before the ExA, against a different policy context (both with reference to the NPS and the WHSMP), and on the basis of new evidence and assessments. A new judgement is to be reached, pursuant to section 104 of the Planning Act 2008, as such previous decisions cannot be considered as precedent.</p>
	<p>Wiltshire Council: Expressed concerns about turning AMES11 into a cul-de-sac noting that this would increase the wear and tear on the byway and increase the potential for conflict between vehicles and the other users. There will need to be an engineered turning circle in sight of the stones and people will use the byway to see the stones and use the turning circle as a carpark and a campsite.</p>	<p>The Applicant considers that these issues will be able to be managed by Wiltshire Council pursuant to its highway, traffic and street authority powers (e.g. section 137 of the Highways Act 1980 in respect obstructions to highways).</p>

	<p><u>Legal Issues</u></p> <p>An extensive discussion was held at the Hearing with respect to the procedural and legal implications of the changes proposed by Wiltshire and TRF in light of their substantive concerns noted above. This is in the context of the fact that the Applicant does not consider that this is a change that it wishes to bring forward itself through the DCO process, for the reasons given above.</p> <p>Changes brought forward by Applicants during Examination have become an increasingly common occurrence (e.g. A14 Cambridge to Huntingdon, Silvertown Tunnel and Thanet Extension Wind Farm) and indeed in a further Deadline 4 submission, the Applicant has indicated to the ExA a number of non-material changes that it <u>does</u> wish to bring forward during this Examination.</p> <p>The Applicant is not aware of the Secretary of State ever having exercised this power at the behest of a third party in respect of a fully developed amendment to a DCO. Indeed, the Applicant notes that the DCLG Guidance for the examination of applications for development consent (March 2015) at paragraph 111 specifically states that "it is important for all parties to remember that it is for the applicant to decide whether or not to propose a change to a proposal during the examination."</p> <p>The Applicant believes that the only power available to the Secretary of State to modify a DCO at the behest of a third party to an Examination is to be found in section 114(1) of the Planning Act 2008.</p> <p>The scope of this power was explained in a letter from the Department for Communities and Local Government (DCLG) to the then Chair of the Infrastructure Planning Commission, Sir Michael Pitt, on 28 November 2011:</p> <p><i>"This power provided by section 114(1) is of course limited in a number of ways. If the Examining Authority decides to consider material changes to an application as part of the examination, The Examining Authority will need to act reasonably, and in accordance with the principles of natural justice. In particular, the principles arising from the Wheatcroft case must be fully addressed, which essentially require that anyone affected by amended proposals must have a fair opportunity to have their views heard and properly taken into account regarding them."</i></p> <p>The importance of the need for anything that influences a decision on a DCO to have been considered fully during the Examination process is reflected in the progress of the Preesall Underground Gas Storage DCO, where the project was initially refused partly on the basis of a matter that was not fully considered during the Examination process, and the applicant was able to successfully judicially review that decision on the basis that it was unfair for it not to have been able to make submissions on that point.</p> <p>The Applicant therefore considers that it is for TRF and Wiltshire Council to bring forward their proposed changes if they so desire them, to allow them to be fully examined, and to consequentially allow the ExA to recommend, and the SoS to decide in what way it wishes to make the DCO in a legally acceptable fashion.</p> <p>The Applicant considers that this must be brought forward by those parties in the following way:</p>
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| | <ol style="list-style-type: none">1. A clear description of the drafting amendments to the DCO proposed. The Applicant acknowledges that this has been done by Wiltshire Council, and it will respond to this substantively in the context of responding to the change as a whole if the change is brought forward, but can state initially that it has some concerns that the Council's proposals will create an internal inconsistency with the DCO given the restricted byway status proposed for the highway on the line of the existing A303.2. An appraisal and presentation to the ExA of whether the proposed amendments to the DCO are "material" in the Wheatcroft sense. The matters to be considered in relation to the materiality of a proposed change are set out in the DCLG Guidance on Changes to Development Consent Orders (December 2015)¹. The Applicant considers that this would include consideration of the following matters:<ul style="list-style-type: none">• the degree of change in the context of the Scheme as a whole (i.e. whether it is significant or minor);• the effect of the change in environmental terms (i.e. whether it would result in a change to the findings of the environmental impact assessment);• the effect of the change on the local community (i.e. what effect, if any, it would have on the local community);• the likely level of public interest in the change (i.e. whether the general public would be likely to be interested in or concerned by the change) taking into account consultation carried out to date.3. Information explaining the rationale for the proposed amendments. This would need to explain why the proposed amendments are necessary and why the Scheme as amended should be granted consent, taking into account the submissions of the interested parties on the issue. Since the Applicant is not proposing the change, part of explaining why the amendments are necessary would be to explain why the application ought to be refused without the necessary change, since that must be a necessary part of the third party's case.4. An appraisal of the likely environmental effects of the scheme as proposed to be amended against the effects of the Scheme as reported in the ES. In the event, that the proposed amendment would give rise to any different or new likely significant effects upon the environment (whether positive or negative), a supplementary environmental statement would be required. This would have to be publicised in accordance with the requirements of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 within the timescale of the Examination. |
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¹ Whilst this Guidance is aimed at changes to made Development Consent Orders, the guidance given on assessing the materiality of a change is also relevant to proposed changes to an application during the Examination.

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| | <ol style="list-style-type: none">5. Given the concerns raised by heritage and spiritual objectors in relation to the specific changes proposed, updates to the heritage and equalities impact assessments to account for these changes will be needed. Similar information would also be required in relation to HRA issues if relevant.6. Information explaining how the documents submitted as part of the application which are affected by the proposed amendment would need to be changed. For example, the Applicant suggests that this would set out which parts of which documents would be superseded or if any needed to be amended, how they should be amended.7. In the event that it were concluded that the proposed amendment amounted to a “material” amendment, the Applicant is of the view that it is clear that the Secretary of State would only be in a position lawfully to exercise his powers pursuant to 114(1) of the Planning Act 2008 if those affected by the amended proposals have had a fair opportunity to have their views taken into account. The Applicant is also aware that such consultation has been required by PINS in relation to non-material changes as well. Accordingly, a third party seeking such a proposed amendment to a DCO will have to ensure that full and fair consultation is undertaken in respect of the change proposed.8. Such consultation would have to comply with the Sedley principles elucidated in <i>R. v Brent LBC Ex p. Gunning</i> (1985) 84 L.G.R. 168. Consequently, any consultation would have to provide sufficient information to permit those consulted (including the Applicant) to make a meaningful response and it must allow adequate time for consideration and response within the Examination timeframe.9. The Applicant considers that as a minimum all of the above-mentioned documents would need to be made the subject of full and fair public consultation in order to ensure that the Secretary of State could be in a position to amend a DCO at the behest of a third party to the Examination process on a lawful and robust basis.10. Finally, the Applicant is of the view that any proposal to change the application for development consent would have to be considered against the DCLG Guidance for the examination of applications for development consent (March 2015) at paragraphs 109-115. In particular:<ol style="list-style-type: none">a. whether sufficient consultation on the changed application can be undertaken to allow for the examination to be completed within the statutory timetable of 6 months;b. whether any other procedural requirements can still be met; andc. whether the application can be examined within the statutory timetable without breaching the principles of fairness and reasonableness. |
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As such, it is for the TRF and Wiltshire Council to propose to the ExA how these changes could be brought forward within the Examination timetable.

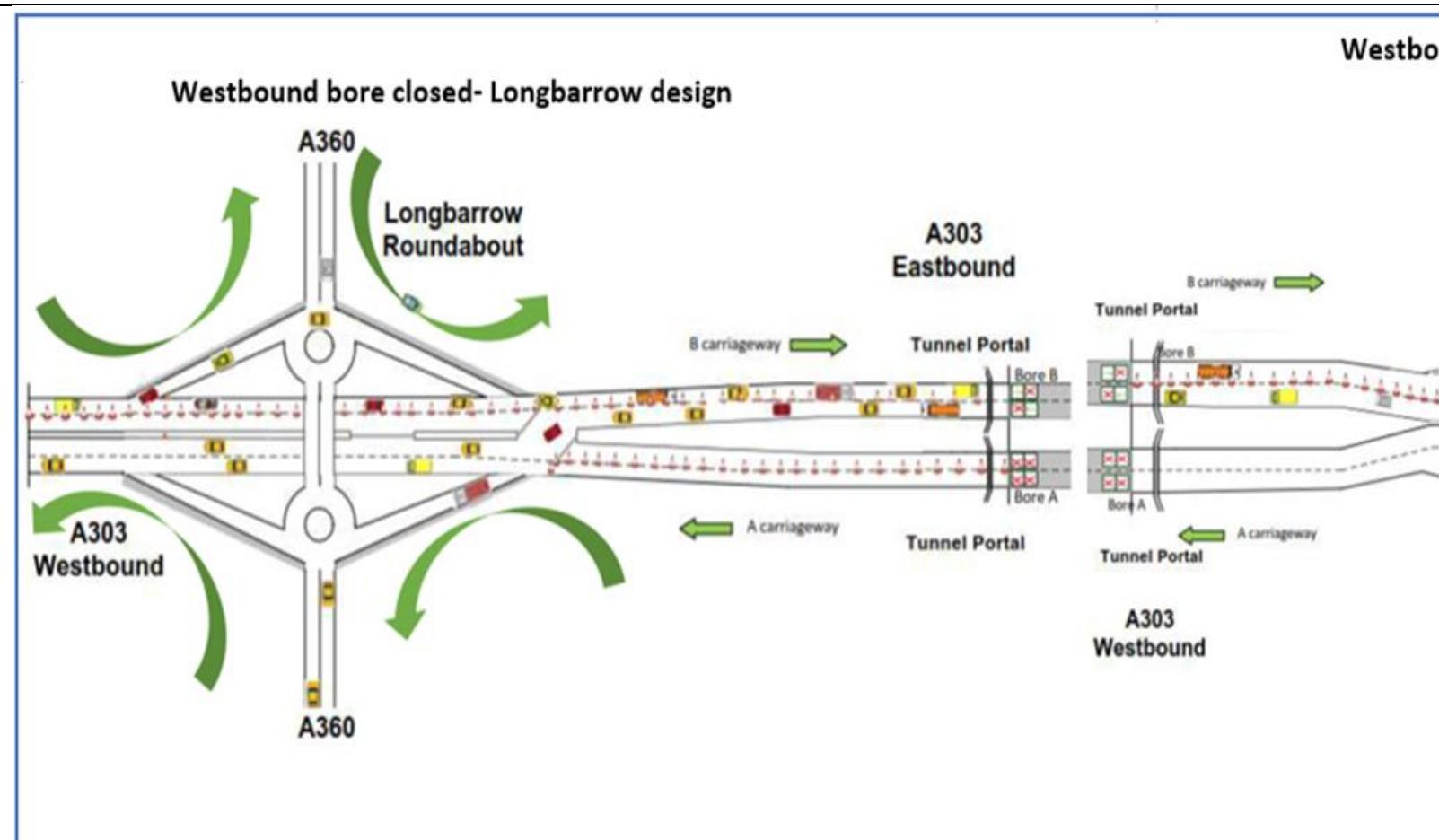
4.13 Proposed restricted byway alongside A360 and interaction with Stonehenge Visitor Centre.	<p>It was agreed at the Hearing that this matter would be discussed (if necessary) at the Compulsory Acquisition hearings in week commencing 8 July. It was, however, noted that discussions between the Applicant and English Heritage are on-going on this matter. More information can be found in the Applicant's response to FWQ Tr 1.32 [REP02-037] and English Heritage's written representation at pages 28-516 to 518 [REP3-013].</p>
4.14 Proposed stopping-up of AMES1 and new footpath along its route [APP-009, Ref P].	<p>Mr Harper, on behalf of the Applicant, noted that the proposal to stop up byway 1 is driven by the need to remove a very dangerous junction from the A303 (a byway opening onto a dual carriageway). The byway is therefore to be diverted via Solstice Junction to join the A303 from a safe junction. Mr Harper added that a footpath was to be retained along the old byway route to maintain access to a heritage feature (tumulus).</p> <p>Mr Gordon Bunker, on behalf of the Green Lanes Environmental Action Movement, noted that whilst having no objection to the proposal here, he questioned if double standards were being applied as the junction at SLAN3 is not having any changes made to it (as discussed above).</p> <p>Mr Harper noted that SLAN3 is widely recognised to be a crossing point of the A303 whereas AMES1 has no easy crossing given the closing off of the central reserve.</p> <p>Ms Gill Anlezark, on behalf of COGS, Mr Roger Upfold and Mr Nicholson on behalf of Cycling UK and Mr Phillip Hutchings, on behalf of Wiltshire Ramblers, raised concerns regarding the loss of AMES1 and of Allington track, noting that the figures used in the Applicant's survey data may have been low due to a closure of Allington track a few months earlier leading to suppressed demand and requested the provision of a new green bridge / crossing facility in this area.</p> <p>Mr Harper noted that these issues have been considered in the response to FWQ TR.1.34 to 36, which explained the alternative proposals which have been considered at this location:</p> <ul style="list-style-type: none"> • Options considered were stopping up and downgrading the public right of way. As there is a barrow (a scheduled monument) in private land near the junction of the byway and A303, a footpath is proposed as the most practical means of maintaining public access to view the barrow. This avoids the need to view the barrow from the verge of A303 dual carriageway, where there are no facilities for pedestrians or for a vehicle to stop. • Recent surveys identified an average of fewer than 3 people a day using AMES1 (Amesbury Road) on foot or cycle over a 38 day period from 25th March 2019. It is therefore not appropriate to provide a bridge or underpass for this level of use when there are reasonably convenient alternatives available. The presence of scheduled monuments adjacent to the A303 and both AMES1 and Allington Track would also limit what could be constructed. The existing Solstice Park junction contains multiple NMU links, which include sections of either shared or segregated footway/cycleways. London Road to the off-road cycle route to the east of Telegraph Hill forms part of National Cycle Network Route 45. The Applicant considers this junction provides an alternative reasonable convenient safe crossing point over the A303.

4.15 Treatment of stopped-up Allington Track.	This item was not discussed in detail at the hearing, although Mr Harper noted that discussions with the affected landowners were on-going. More information can be found in the Applicant's response to FWQ Tr1.36 [REP02-037] and the Response to Mrs Crook in section 34 of the Comments on Written Representations [REP3-013].
4.16 (added at hearing) Meeting point of Stonehenge Road and proposed restricted byway on line of existing A303	<p>Mr Howard Smith, on behalf of his clients Mrs Pamela Sandell and Mr Philip Sawkill, indicated that it is desired that the proposed end point of the restricted byway should be moved to the east of its current proposed location. This is desired as it is felt by his clients that the current location would lead to a 'car park' of people wishing to stop and view and access Stonehenge which could lead to confrontation, security issues and access problems (e.g. at harvest time). Mr Smith suggested moving the stopping up point further down to the junction of the Woodford Valley Road and taking over maintenance up to the entry of West Amesbury Farm, which has support from the other owner in the Stonehenge Road.</p> <p>Mr Phil Tilley, on behalf of Wiltshire Council indicated that they had concerns with this proposal due to potential junction layout issues and other residents potentially being affected.</p> <p>Mr Patrick Robinson on behalf of National Trust set out that they support the current proposal, and would reserve their position on this matter until further detail was provided, noting that a private means of access to Stonehenge Cottages could potentially be affected.</p> <p>Mr Harper, on behalf of the Applicant, set out that this matter had already been discussed by Applicant with Mr Smith and the Council, but that the Applicant was happy to discuss it further with both parties.</p>

5 CONSTRUCTION TRAFFIC

<u>Agenda Item</u>	<u>Highways England response</u>
5.1 Potential for diversions from A303 to alternative routes during the construction phase to affect communities.	This item was not discussed in detail at the Hearing. The Applicant has provided previous responses on these issues in its responses to FWQs 1.38 and 1.40 to 1.42. The effects of construction traffic will be able to managed through the Traffic Management Plan (approved by the Secretary of State following consultation with Wiltshire Council, and including the matters set out in the MW-TRA section of the OEMP secured by paragraph 4 of Schedule to the draft DCO) required by paragraph 9 of Schedule 2 to the draft DCO.
5.2 Environmental impacts of construction traffic using internal haul routes.	<p>This item was not discussed in detail at the Hearing. Construction traffic using haul routes was assessed in the environmental impact assessment reported in the Environmental Statement, in particular Air Quality, Landscape and Noise. The haul routes are described in sections 2.4.17 to 2.4.20 in Chapter 2 of the ES and are illustrated on ES Figure 2.7 (APP-061). Mitigation measures for these routes are set out in the OEMP.</p> <p>The Applicant has also answered questions on this topic - see the response to questions AQ1.13, 1.18 1.19, LV1.23, NS1.30 and 1.48.</p>

6 OPERATIONAL TRAFFIC	
<u>Agenda Item</u>	<u>Highways England response</u>
6.1 Potential for traffic diversion during tunnel closures/ emergencies to affect communities.	<p>Mr Rhind-Tutt set out his concerns that there is a possibility that when the tunnel is operating in contraflow, the position of the crossovers would mean that affected traffic would have substantial diversions along minor roads (22.5 miles, taking 40 minutes); and that to avoid this, lighting of crossovers would be required within the WHS.</p> <p>In response, Mr Graham Martin, on behalf of the Applicant, explained that, save for unplanned closures, contraflow would only be in place at night and as such, in times of low flow. He noted that Mr Rhind-Tutt is correct that contraflow operation would require cross-overs (for traffic to “cross-over” the central reserve) and that the set-up and operation of the cross-overs would require temporary lighting to be provided at the cross-overs. For this reason, the cross-overs have been located outside the World Heritage Site.</p> <p>Mr Martin explained that Mr Rhind-Tutt is also correct that with the cross-overs outside the WHS, some turning movements will need to be restricted during operation of contra-flow. However the turn in question will remain open during contra-flow and the suggested diversion would not be required. This has been allowed for in the preliminary design by the provision of a second cross over between the WHS and Longbarrow junction (as illustrated on the General Arrangement Drawings [APP-012]).</p> <p>The operation of contra flow during closure of the west bound tunnel is shown schematically below:</p>



In response to this, **Mr Rhind-Tutt** continued to note the volume and speed of traffic that would approach Longbarrow, as well as the number of vehicles, including army vehicles that will need access there, and therefore questioned whether the slip roads were long enough in a contraflow situation. **The Applicant** can confirm that the preliminary design for the scheme has been subject to a Road Safety Audit in accordance with HD19/15 (as amended) of the Design Standard for Roads and Bridges (DMRB) and no concerns

were raised in that process regarding the layout of the sliproads or cross-overs. The provision of two crossover facilities at Longbarrow Junction provides the opportunity for the junction to diverge to be isolated from the main A303 traffic cross-over if required.

Mr Rhind-Tutt also expressed concern that this issue is not just about regular maintenance but was also about unplanned occurrences (breakdowns and incidents) and indicated that figures from Hindhead Tunnel demonstrate 702 closures over 26 months in the period of 2015 to 2017 at contraflow.

The Applicant indicated it would respond in writing on this point, which it does below, having reviewed the data set:

- The A303 tunnel is being designed to deliver a highly available and high performing tunnel asset that is as safe as the open highway. Whilst it is relevant to refer to other tunnels on the Strategic Road Network, caution should be exercised when interpreting specific data sets as underlying contextual factors (such as age, location, and standard of construction and existing level of repair) will influence particularly the number of unplanned maintenance interventions summarised below.
- The A303 is taking on board lessons learned from other projects such as Hindhead to improve upon and factor into the Scheme's design and planning, notably surrounding the integration and testing of the tunnel operational systems to support a highly performing and highly available tunnel asset.
- There were 702 events recorded across a range of incident/ event types in the operational logs² that could have led to individual lane, bore or full tunnel closures. Upon review of the data there were a total of 620 where a form of closure was implemented over the period. There were, however, a number of event logs in the data where it was not evident that a closure was put in place, but rather an operational intervention was set i.e. 40mph speed restriction as part of a fog plan or speed management plan to address erratic driver behaviour. These events have been discounted for the purposes of this review, resulting in 620 events that are discussed below.
- Of the 620 closures identified there were the following number of full tunnel closures, full bore closures and individual lane closures as shown in table 1 below. This data is also split to show the duration of the closures across four time bands.

Closure	Number	0- 15 mins	16-30 mins	31-60 mins	1hr +
NB FULL	142	74	7	7	54
SB FULL	148	71	6	7	64

² Whilst operational logs provide a comprehensive record of events, due to the process of data recording in some instances they can require additional analysis in order to provide a comprehensive understanding of network events.

NB LANE 1	80	29	12	13	26
NB LANE 2	61	30	5	2	24
SB LANE 1	100	44	9	8	39
SB LANE 2	73	32	4	6	31
Full Tunnel	16	2	0	1	13
Totals	620	282 (45%)	43 (7%)	44 (7%)	251 (40%)

- From this data it can be seen that:
 - 45% of the 620 closures lasted for 15 minutes or less and 60% for less than 1 hour. During the short closure periods it is most likely that traffic is held until the incident is clear in the same way that this would be dealt with on a motorway or major A-Road, rather than a formal diversion route being put in place.
 - Of the 620 events, the majority of closures were related to single lane closures (314). In normal circumstances traffic would still be able to use the tunnel under controlled conditions i.e. reduced speed limits during these times. There were 306 events which resulted in a bore/ tunnel closure.
 - There were 105 tunnel bore closures (NB and SB) due to incidents, with an average closure duration of 25 minutes. Of those 105 bore closures 82 lasted for 30 minutes or less.
 - There were 139 lane closures due to incidents that required single lane closures with an average closure duration of 47 minutes. 94 of the 139 lane closures lasted less than 1 hour.
 - There were 71 lane closures for unplanned maintenance that required single lane closures with an average closure duration of 33 minutes. 67 of the 71 lane closures lasted less than 1 hour.
 - There were 48 bore closures for unplanned maintenance with an average closure duration of 18 minutes, with 45 of the 48 bore closures lasting less than 1 hour.
 - There were 99 overnight bore closures to undertake planned maintenance works with an average closure duration of 6 hrs 55 minutes.
- The operational data records a range of events, only some of which cause appreciable delay to road users. Many events are managed through reduced speed limits or through temporary closure of a single lane. Planned maintenance involving a full closure of a single bore is undertaken when flows are low through a contraflow in the other bore. The data records some 48 events when one bore of the tunnel was closed for unplanned events and incidents for more than 15 minutes. It is only these

	<p>longer duration unplanned full closures of a tunnel bore that could materially impede traffic. The data show that the total duration of these closures of Hindhead tunnel was less than 3 hours a month.</p> <p>In response to comments raised by Mr Noake on behalf of Home Bargains, Mr Taylor QC confirmed that 16ft high vehicles would be catered for in the tunnel and on the diversion routes, and noted that except in emergencies or unplanned scenarios, one bore would be open if one was closed.</p>
6.2 Potential for exceptional loads to affect communities.	This item was not discussed in detail at the Hearing. However the Applicant notes that such loads would be managed by local highway authorities in the usual way and pursuant to item MW-G15 of the OEMP.

7 ASSESSMENT OF OTHER SUGGESTED ROUTES

<u>Agenda Item</u>	<u>Highways England response</u>
7.1 Route F010 – through Upper Woodford Valley.	<p>Route F010 was considered alongside a number of other options referred to by other Interested Parties.</p> <p>At the Hearing, Mr Taylor QC, on behalf of the Applicant, reminded those present as to the context of the consideration of alternatives within the DCO regime:</p> <ul style="list-style-type: none"> • paragraph 4.27 of NPSNN states that where projects have been subject to full options appraisal in achieving their status in road or rail investment strategies then option testing need not be considered by the ExA or the decision maker. As such, the paragraph indicates that where such consideration of alternatives has already been undertaken as part of the investment decision making process, it is not necessary for the ExA or the decision maker to reconsider this process, but they should be satisfied that this assessment has been undertaken. Given the extensive options appraisal process that has taken place on the scheme (as set out in the TAR, the Case for the Scheme and ES Chapter 3) this is not a matter that should be reopened during the examination. • the consideration of alternatives that has been undertaken fully complies with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (regulation 18(3)(d) and Schedule 4(2) in respect of alternatives) and full details of the options considered including the decision of the preferred route process has been provided. An explanation has been provided in Chapter 3 of the ES which described the options put forward at the statutory consultation, the changes put forward at the supplementary statutory consultation and the options considered since PRA. <p>Mr Steve McQuade, on behalf of the Applicant, then went on to summarise the options appraisal process that has been carried out in respect of the Scheme:</p> <ul style="list-style-type: none"> • Proposals for the scheme have been the subject of extensive study and consultation since 1991. The process of options identification and route selection leading to the Scheme is summarised in the Case for the Scheme, Section 3.2 and in

	<p>Chapter 3 of the ES, Assessment of Alternatives. The Scheme has been developed from an extensive process of options appraisal, including the consideration of options which avoided the World Heritage Site altogether, to identify the optimum solution, aimed at addressing the congestion problems on the A303 and delivering benefits for the WHS.</p> <ul style="list-style-type: none">• As set out in Section 3.2 in Chapter 3 of the ES [APP-041], the process of options identification and route selection leading to the Scheme can be summarised as follows:• <i>Corridor identification and initial sifting of corridors</i> – in which over 60 route options, grouped into seven lettered route corridors, were reviewed. These corridors included surface routes to the north and south of and outside the WHS, surface routes partially within the WHS, and partially tunnelled routes within the WHS. On the basis of a range of assessment criteria including impacts on settlements, severance of the WHS, environmental impacts and journey time, two corridors were taken forward for the development of route options within the preferred corridors.• <i>Development of route options within the preferred corridors</i> – in which ten options were assessed, seven partially tunnelled options within the WHS and with bypasses to the north and south of Winterbourne Stoke, and three surface options running south of and outside the WHS. Assessment against the same criteria led to the selection of three route options for further appraisal, as discussed below.• <i>Route options appraisal and sifting to identify options to take forward for further appraisal</i> – in which the options assessed comprised two partially tunnelled options through the WHS, one with a northern bypass of Winterbourne Stoke, one bypassing the village to the south, and one surface option to the south of and outside the WHS (F010).• <i>The selection of route options, which were taken to non-statutory public consultation in January/March 2017</i> – the comparison of the three options in (c) above, identified the surface route (F010) to be a significantly longer route which would pass through a largely unspoilt, high quality, tranquil landscape with an additional crossing of the River Avon SAC. It would have a much larger footprint and a greater overall environmental impact than the partially tunnelled options, despite having greater benefits for the WHS. The surface route would also leave higher levels of rat-running traffic adversely affecting the quality of life in local communities. (<i>More detail on the rationale for the rejection of F010 in favour of partially tunnelled options through the WHS was presented in response to Written Questions AL1.11-14</i>). Consequently, the two partially tunnelled routes, with a bypass to either the north or south of Winterbourne Stoke, were taken to non-statutory consultation.• <i>The selection of the Preferred Route which was announced by the Secretary of State in September 2017</i> - in response to the feedback received during the non-statutory consultation and findings of ongoing archaeological surveys, seven modifications of the two partially tunnelled options were developed for further appraisal and assessment. The Preferred Route was selected, with a northern bypass of Winterbourne Stoke, as it provided more opportunities to bring overall benefits to the WHS, presented lower risk to the River Avon SAC/River Till SSSI, avoided impacting the more complex valley landscape to the south of Winterbourne Stoke, affected the visual amenity of fewer people in Winterbourne Stoke and Berwick St James, would be located further away from the RSPB reserve at Normanton Down and would be located closer to the existing A303 and its associated disturbance.
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It is in this context that the submissions of the Interested Parties at the Hearing should be considered:

- **Mr Barry Garwood** set out his proposed alternative set out at Appendix A to his summary of submissions at the OFH [REP3-070]. **Mr McQuade and Mr Hanson, on behalf of the Applicant** confirmed that this route is covered by the 'A' route corridor considered through the options appraisal process.
- **Mr Rhind Tutt** set out his proposed alternative which would leave the existing A303 as it is and create a new route to the south of Salisbury. **Mr Hanson** indicated that such a route would be much longer than the existing A303 leading to longer journey times in uncongested conditions, noting that this was one of the main reasons why the 'G' route corridor had been rejected. Such a proposal would also not meet the scheme objective to remove the sight and sound of traffic from the WHS. Further information on why the 'G' route corridor (of which Mr Rhind Tutt's alternative forms part) was not taken forward can be seen in ES Chapter 3.
- **Mr Brian Edwards** suggested that the Scheme does not remove traffic from the WHS. **Mr Taylor QC** explained that the aim of the Scheme was to remove the sight and sound of traffic from the WHS, rather than traffic per se, to align with Aim 6 of the WHS Management Plan. The Heritage Impact Assessment explains fully how that aim is met [APP-195].

In respect of option F10 specifically, **Dr Temple**, on behalf of the SHA noted that whilst the SHA are not 'promoting' F10, they were concerned that the statutory consultation respondents were not given a WHS avoidance option. He went on to explain that the SHA would challenge one of the reasons given for why option F10 was dropped: increased rat running through the local villages. He suggested that the SHA believes that this conclusion does not seem to be supported by the traffic modelling evidence that the Applicant presented in one of its submissions which shows a substantial reduction in rat running with F010.

Mr Hanson, on behalf of the Applicant, indicated that a response to this concern would be set out in writing; which is set out below:

- WebTAG's 'Guidance for the Technical Project Manager' (May 2018) advocates an approach to scheme appraisal that is proportionate. Paragraph 1.3.3 notes that proportionality covers design and specification, cost estimation and data and analyses. The WebTAG unit on 'The Transport Appraisal Process' (May 2018) advocates a proportionate approach to options development. Paragraph 1.1.3 notes that proportionality is a key part of appraising options development through an objective-led and evidence-based approach. Paragraph 2.12.18 notes that the main scope of proportionality in approach relates to modelling.
- Section 3.2 of the same WebTAG unit notes the requirements of the Transport Model. Paragraph 3.2.2 of the guidance notes that a model used in Stage 2 'Further Appraisal', which is undertaken on a "small number of better performing options", requires a more detailed representation of the transport network and more detail in the dimensions of the model and "demonstrate a superior standard of calibration and validation against contemporary observed traffic/travel characteristics". The guidance notes in paragraph 2.2.19, that Stage 1 'Option Development', requires analysis tools that are 'fit for purpose for the stage of appraisal and need to provide analysts with sufficient information to understand current and future travel demands at the level of detail required'.

	<ul style="list-style-type: none"> • Chapter 10 of the TAR [REP1-031] describes the traffic modelling undertaken in compliance with these requirements. The Applicant's response to Al.1.11 [REP2-024] summarises the interpretation made explaining the relative merits of the F010 route compared to the tunnelled route options. Paragraph 20 explains that the faster journey time offered by the corridor D options would result in traffic diverting from local parallel routes (the Parkway). In contrast, as explained in paragraph 21, the F010 route is longer and less attractive for local movements than D061 / D062 and it is more likely that trips making local movements, including HGV's, will use the local roads north of the A303. It is for this reason that F010 was assessed to interact less well with the local road network, with more traffic expected through the local villages with F010 than with the tunnelled options, as explained in paragraph 22. • Paragraph 3.2.3 [of REP3-063] comments on paragraph 23 of Al.1.11. Because the tunnelled options would offer a quicker alternative than the current A303, some traffic using the adjacent local roads would divert to benefit from the faster journey times. This would result in less traffic through the local communities. Section E.1 of TAR Appendix E [REP1-036] shows the route options. The F010 route is further to the south and would be less attractive than the tunnelled options. It is implausible therefore, that more traffic would be diverted from the local communities with F10 compared with the tunnelled options.
7.2 The 'Parker Route' – Balfour Beatty.	<p>Colonel Parker made a submission on the development and benefits of his proposed route.</p> <p>The Applicant responds as follows (building on the summary oral submissions provided by Mr McQuade at the Hearing):</p> <ul style="list-style-type: none"> • The route presented by Colonel Graham Parker [REP3-083] was considered at the Public Inquiry in 2004 (known at that time as 'Alternative Route 4'). It was therefore included in the list of historic routes assessed in PCF Stage 1 (Design Fix A and B) as listed in paragraph 6.4.1 of the Technical Appraisal Report (TAR) [REP1-031] and as illustrated in Appendix B1 [REP1-033]. It was considered as part of the assessment of Corridor F (south) as set out in Section 5.2 of the TAR (paragraph 5.2.112 to 5.2.166) and summarised in Table 5-7 (Page 102). Corridor F was not ruled out at this stage. Appendix C6 of the TAR [REP1-034] explains how the routes within Corridor F were then rationalised. The eastern sections of Alternative Route 4 were incorporated into Route Options F001, F003 and F006. The western section was incorporated into Route Option F001, F002 and F007 (similar to '2004 Act Route'). The central section was ruled out as it bisected Little Durnford and affected High Post Golf Course which were avoidable with other route options. Therefore, consideration has been given to this alternative route in the option appraisal process. • The Inspector's Report for the 2004 Public Inquiry [REP1-021] includes in section 7.5 a description of Alternative Route 4 including the justification, support and objections received at the time. The Inspector's conclusions are given in paragraphs 10.511 to 10.521 which conclude as: "<i>The Alternative Route is also at odds with the Transport Plan and with the transport provisions of the Development Plan [7.5.35, 7.5.61], and it would cause substantial environmental damage in the Bourne and Woodford Valleys. It would also represent poor value for money. These consequences would in my view significantly outweigh the benefits which the Alternative could deliver. I conclude that Alternative Route 4 does not warrant further investigation.</i>"

8 ECONOMIC AND BENEFIT COST RATIO ASSESSMENT

<u>Agenda Item</u>	<u>Highways England response</u>
<p>8.1 Reliance on monetisation of cultural heritage benefits to achieve positive BCR.</p> <p>8.2 Improving the A303 between Amesbury and Berwick Down, National Audit Office, May 2019.</p>	<p>These matters were taken together at the Hearing.</p> <p>Several Interested Parties raised a number of concerns as to the methodologies utilised for the contingent valuation study and highlighted the value for money concerns raised by the National Audit Office report, and its statement that the contingent heritage benefits were uncertain.</p> <p>In response to these criticisms, Mr Taylor QC responded as follows:</p> <ul style="list-style-type: none"> • the Contingent Valuation Report and its quality assurance report are set out at Appendix H and I of the CoMMA Appendix D [APP-302]. The surveys that informed the CVR are appended to this document at Appendix A; • the Applicant strongly rejects any claim of inappropriateness, and scrutiny of procedures has been done on an internal and external basis; • the Applicant has provided a robust response to methodological concerns in part 13 of its Comments on Written Representations [REP3-013] (and responses have now also been made in the Applicant's Deadline 4 submissions in response to the Deadline 3 submissions of Paul Gossage and the Stonehenge Alliance); • the contingent valuation study does not seek to say that its results <u>are</u> the economic benefits deriving from the Scheme, but instead seeks to quantify the heritage benefits for valuation purposes; • the question of value for money does not form the basis of the ExA's assessment of the heritage impacts of the Scheme, which is done in the context of the NPS, EIA and WHS Convention; • in judging the Scheme, the ExA is concerned with land use planning considerations and the balance of benefits and impacts in that context in light of the tests set out in section 104 of the Planning Act 2008, it is not being asked to decide on whether the Scheme should be funded, which is a decision for Government; and • the question of benefits and impacts pursuant to section 104 is not a question of monetary value of those benefits, but is a planning question.

APPENDIX A: Contingent Valuation Report



A303 Amesbury to Berwick Down

Valuing Heritage Impacts: Appendices

Arup Atkins Joint Venture

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P03, S3

13/06/2017

Notice

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VIF values above 4 would generate concerns around multicollinearity.	CI

Appendix A Survey Information

A.1 Visual information provided to survey respondents

Visual information provided to survey respondents is set out here. All three surveys included the same material.

Map – Status quo



Photo – View of the A303 from the stone circle: Status Quo



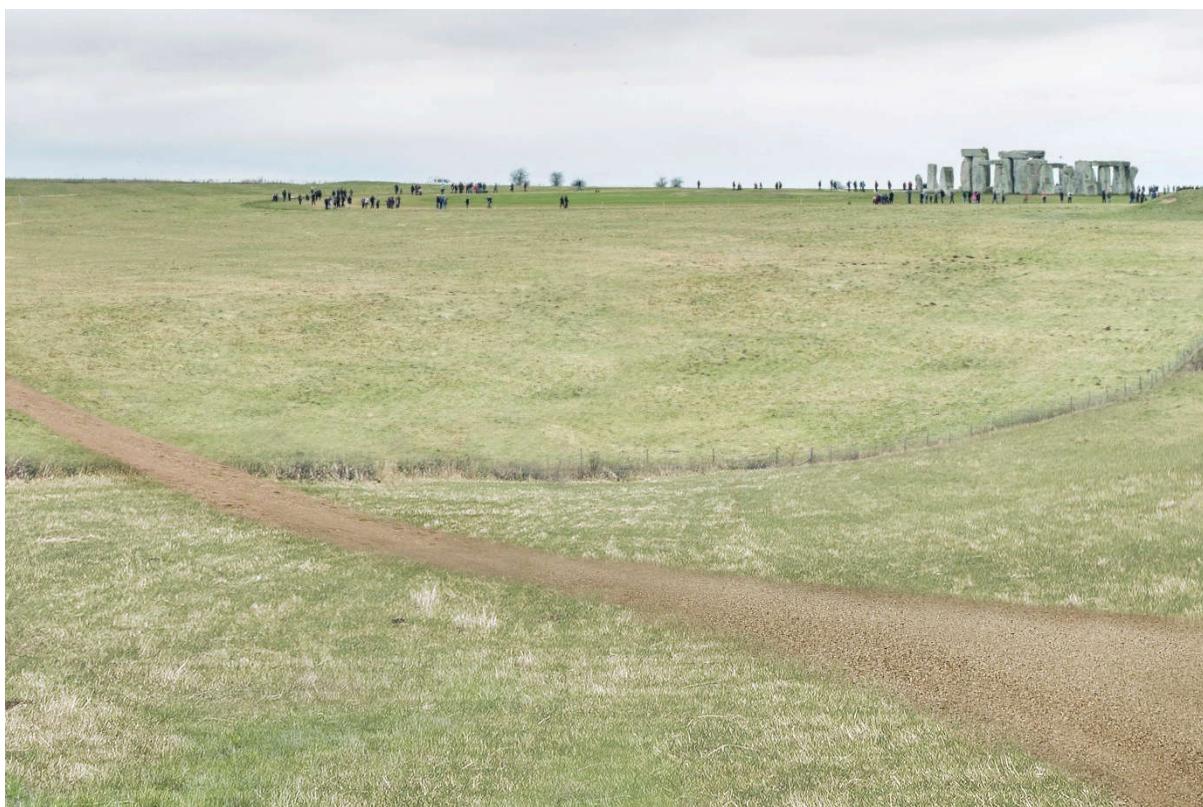
Photo – View of the A303 from the stone circle: A303 removed



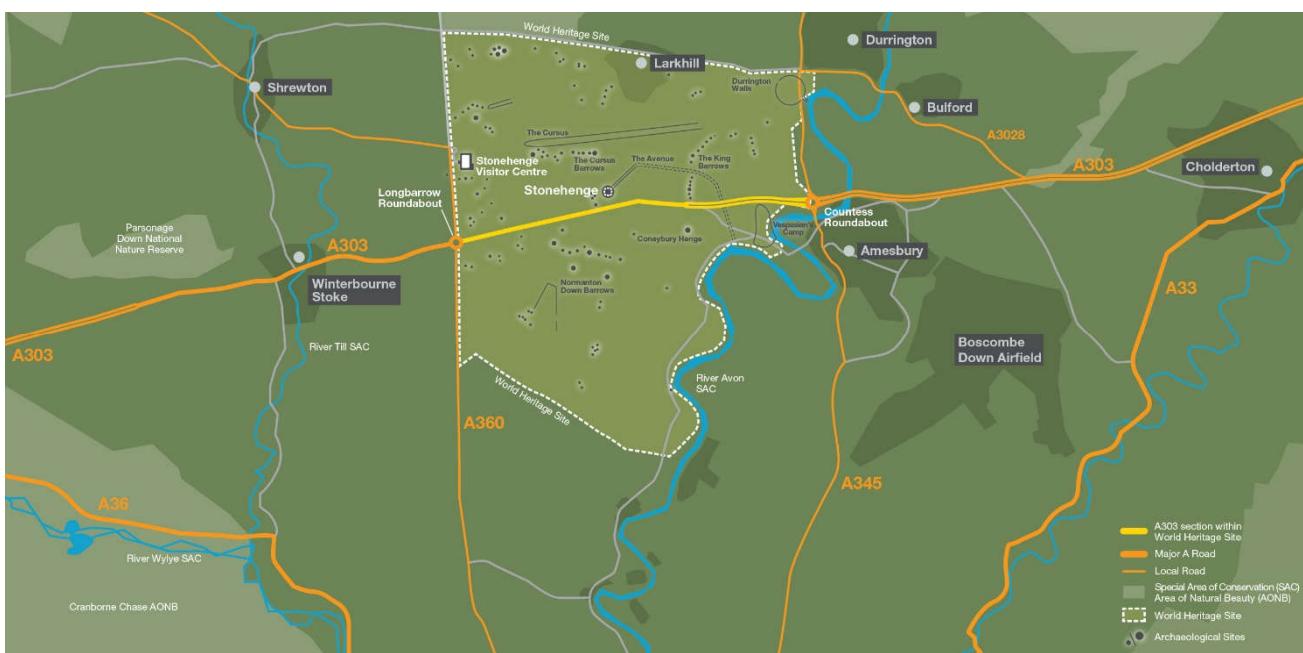
Photo: View of Stonehenge from the A303: Status Quo



Photo: View of Stonehenge from the A303: A303 removed



Map: Status quo



Map: A303 removed into tunnel



A.2 Stonehenge Visitor Survey

Stonehenge Visitor Survey



Introduction [READ OUT]

My name is _____ and I am working with Ipsos MORI, the market research agency. Highways England is looking at possible ways of resolving issues with the A303:

- The A303 runs through the Stonehenge World Heritage Site and is part of the national road network.
- We want to understand people's thoughts about removing the road from the Stonehenge site.
- We would like to ask you questions about your experience today and views of an alternative transport scenario to the current A303 within the Stonehenge World Heritage Site.

We would be grateful if you could spare about **15 minutes** to answer some questions.

- You do not need any previous knowledge of the Stonehenge World Heritage Site or the road network.
- The survey is anonymous and all information provided is strictly confidential.

I would also stress that this survey is not a public consultation. We are simply exploring views of possible solutions to address issues caused to the Stonehenge World Heritage Site by the A303.

SC1. Can I just confirm that you have understood the information I have provided about the background and purpose of this survey?

- Yes CONTINUE
- No RETURN TO INTRO AND CLARIFY ANY AREAS OF UNCERTAINTY

SC2. Would you be willing to help with this survey?

- Yes CONTINUE
- No CLOSE AND THANK

IF YES, SHOW TEXT BELOW:

READ OUT

Many thanks and I'd like to start with a few questions just to confirm that you are eligible for the survey. The interview will be conducted on a tablet computer and I will ask you to look at the screen for much of the time.

Screener questions

SQ1. Are you currently resident in the UK?

Yes

No

SQ2. Which of the following age groups do you fall into (INTERVIEWER: SHOW SCREEN)?

Under 16 years old TERMINATE & THANK

16 -- 19 years old

20 -- 24 years old

25 -- 29 years old

30 -- 34 years old

35 -- 39 years old

40 -- 44 years old

45 -- 49 years old

50 -- 54 years old

55 -- 59 years old

60 -- 64 years old

65 -- 69 years old

70 -- 74 years old

75 -- 79 years old

80 -- 84 years old

Over 84 years old

SQ3. Are you visiting the Stonehenge World Heritage Site in a professional capacity (for example, are you working here, a teacher on a school trip, a nanny or child minder accompanying children, a driver bringing visitors into the site)?

Yes

No

TO QUALIFY ALL RESPONDENTS MUST BE UK RESIDENTS, 16 OR OVER AND NOT VISITING STONEHENGE IN A PROFESSIONAL CAPACITY

IF SC2 = No or SQ2 = Under 16 or SQ3 = Yes – TERMINATE & THANK

INTERVIEWER SAY: Thank you very much for your time today. Unfortunately, we will not be able to use your responses in our survey today. We hope you have a great day.

SQ4. Have you already visited the Stonehenge stone circle as part of your visit today?

Yes

No

IF NO – CLOSE AND THANK: We will not delay you from seeing the stones now. We hope you will be able to return to complete the full questionnaire after your visit

Quota questions

Interviewer to complete Q1. Respondent gender

Q1.

Male

Female

Other

Interviewer to hand/show tablet to respondent

A. Visits and attitudes

We would like to ask some questions about your visit to Stonehenge today, and your attitudes to some of the issues that affect this heritage site.

A1. Have you previously visited any other World Heritage Sites in the UK (e.g. Blenheim Palace, Canterbury Cathedral, Neolithic Orkney etc.)?

Please select one answer

- Yes
- No
- Don't know

A2. Apart from today, how many times, if any, have you visited the Stonehenge World Heritage Site in your lifetime? By 'visited' we mean exploring the landscape, paying to visit the stone circle or walking or cycling in the area.

Please select one answer

- 0 1 2 3 4 5 6 7 8 9 10+

SP DROP DOWN LIST 0-10+

A3. How many adults, age 16 or over, including yourself, are in your party on this visit?

Please select one answer

- 1 2 3 4 5 6 7 8 9 10+

SP DROP DOWN LIST 1-10+ [ZERO NOT ALLOWED AS INCLUDES RESPONDENT]

IF MORE THAN '1' AT A3 ASK:

A4. And how many children aged under 16 are with you today on this visit?

Please select one answer

- 0 1 2 3 4 5 6 7 8 9 10+

SP DROP DOWN LIST 1-10+ [MAY BE ZERO]

A5. Approximately how long did you spend at the World Heritage Site today (including the stone circle, wider landscape and visitor centre)?

Please select one answer

SP DROP DOWN LIST [hours (e.g. 1 hour)

- Less than ½ an hour
- From ½ an hour up to 1 hour
- From 1 up to 1½ hours
- From 1½ up to 2 hours
- From 2 up to 2½ hours
- From 2½ up to 3 hours
- From 3 up to 3½ hour
- From 3½ up to 4 hours
- From 4 up to 4½ hour
- From 4½ up to 5 hours
- From 5 up to 5½ hour
- From 5½ up to 6 hours
- From 6 up to 6½ hour
- From 6½ up to 7 hours
- 7 hours or more

A6. Apart from the stone circle, are you familiar with the other archaeological monuments in the Stonehenge World Heritage Site?

- Yes
- No

A7. How did you arrive at the stone circle from the visitor centre?

Please select one answer

- Walking
- Shuttle bus
- Other (please specify):

A8. Did you:

Please select all that apply

- Pick up a free guide book
- Buy a guidebook
- Hire an audio tour
- Download an audio tour to your mobile phone
- None of the above [Exclusive]

A9. How did you travel to Stonehenge today? Please select your main mode of transport.

Please select one answer

- Own car (driver)
- Own car (passenger)
- Other's car
- Public transport (train)
- Public transport (bus)
- Public transport (train and bus)
- Organised trip/tour
- Cycled/walked
- Other (please specify): _____

A10. Which of the following sentences best describes your visit today?

Please select one answer

- The visit to Stonehenge was my sole/main purpose
- The visit is part of wider trip in the area/region
- The visit is part of wider trip in the UK
- I was passing through the area
- Other (please specify): _____

A11. How long did it take you to get to Stonehenge today?

_____ hour _____ minutes (e.g. 1 hour, 30 minutes)

A12. Approximately how much did you personally spend on your trip to Stonehenge today? This includes travel costs to and from the site, as well as any expenditure on entry, food or gifts while at the site.

Please enter a number to the nearest whole pound

£_____

- Don't know

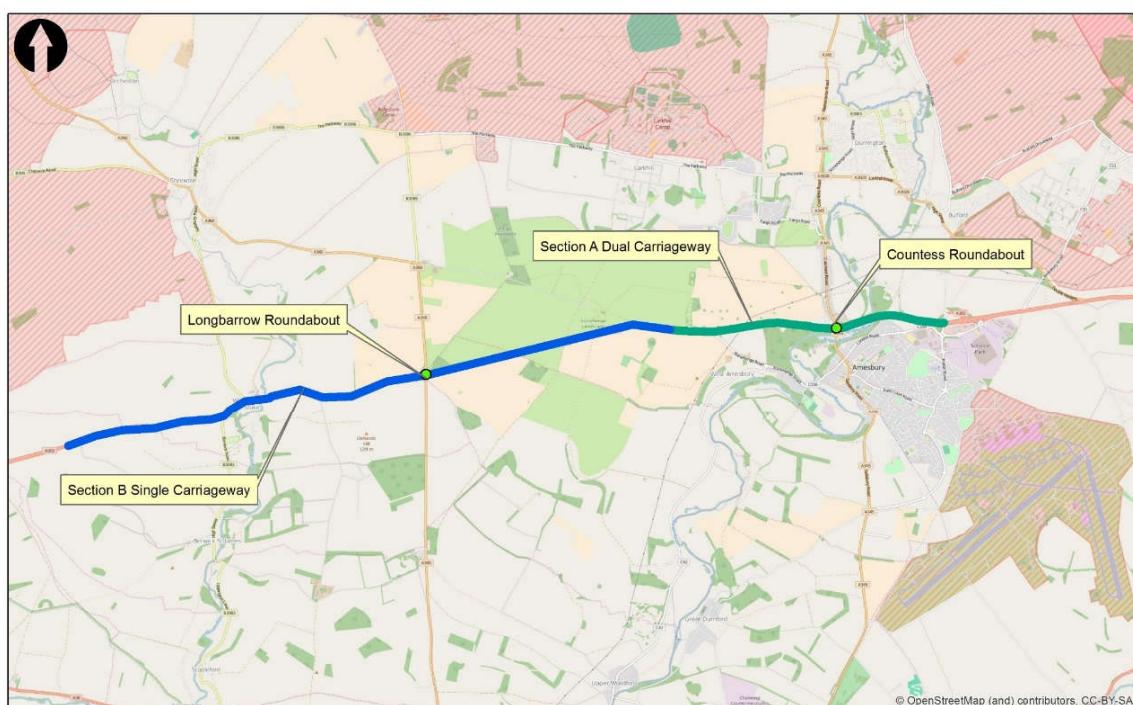
A13. Did you use the A303 road during your any part of journey today?

Please select one answer

- Yes
- No
- Don't know

A14. The interviewer will now hand over a maps showing the A303 between Amesbury and Winterbourne Stoke.

INTERVIEWER TO HAND OVER A14 MAP Apart from your trip here today, how often do you travel on the A303 between Amesbury and Winterbourne Stoke in either direction, i.e. the section passing Stonehenge?



Amesbury to Berwick Down: Section Location Detail

The map shows the section divisions for the Amesbury to Berwick Down Scheme.

Key

- Section A Dual Carriageway
- Section B Single Carriageway
- Roundabouts

Please select one answer

- More often than once a week
- Less often than once a week but more than once a month
- Less often than once a month but more than once a year
- Less often than once a year
- I have never travelled along that road
- Don't know

A15. If the A303 were removed from its current location you would no longer be able to see Stonehenge whilst travelling past by car, coach, or bus. To what extent, if at all, would you

miss seeing Stonehenge whilst travelling along the road, on a scale of 1 to 5 where 1 is ‘not miss at all’ and 5 is ‘miss a lot’?

Please select one answer

Not miss at all

Miss a lot

Don't know

1	2	3	4	5	DK
---	---	---	---	---	----

A16. Overall, how much did you enjoy your visit today, on a scale of 1 to 5 where 1 is ‘did not enjoy at all’ and 5 is ‘enjoyed a lot’?

Please select one answer

Did not enjoy at
all

Enjoyed a lot

1	2	3	4	5
---	---	---	---	---

A17. How likely is it that you will visit Stonehenge again in the future, on a scale of 1 to 5 where 1 is ‘not at all likely’ and 5 is ‘very likely’?

Please select one answer

Not at all likely

Very likely

1	2	3	4	5
---	---	---	---	---

A18. To what extent do you disagree or agree with the following statements about the Stonehenge World Heritage Site (referred to as Stonehenge below)?

Please select one answer per row

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
a. Stonehenge is one of the most important heritage sites in the UK	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Stonehenge has a value only for those who actually visit it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Stonehenge should be protected for future generations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Other monuments within the World Heritage Site surrounding the Stonehenge stone circle should be equally protected	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. I don't think that Stonehenge has any inherent value	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A19. Are you a member of a heritage, conservation or environmental organisation?

No [Exclusive]

If yes, please select all that apply

Member of a Stonehenge preservation organisation

Member of the English Heritage

Member the National Trust or Historic England

Member of other organisation. If so, please provide name(s): _____

A20. We would like to ask you about your preferences for how public spending is allocated. Public spending is allocated to several areas. In your opinion, what are the TOP 5 areas where public funds should be spent?

Please read all options before selecting your top 5 areas.

RANDOMISE ORDER

**CHOOSE 5 AREAS
ONLY**

- | | |
|--------------------------------------|--------------------------|
| Education | <input type="checkbox"/> |
| Environment | <input type="checkbox"/> |
| Health care | <input type="checkbox"/> |
| Heritage | <input type="checkbox"/> |
| Libraries, arts, museums and culture | <input type="checkbox"/> |
| Housing | <input type="checkbox"/> |
| International aid/development | <input type="checkbox"/> |
| Defence | <input type="checkbox"/> |
| Pensions | <input type="checkbox"/> |
| Public order and safety | <input type="checkbox"/> |
| Sport | <input type="checkbox"/> |
| The economy | <input type="checkbox"/> |
| Transport | <input type="checkbox"/> |
| Don't know | <input type="checkbox"/> |

B. Valuation questions

In this section we will present information about a possible change in the roads layout in the area.

- We remind you that this survey is not a public consultation.
- It is part of a targeted survey for assessing the effect of removing the A303 from the surrounding area around Stonehenge.
- Stonehenge is one of the 29 UK sites that have been designated a United Nations World Heritage Site, making it of Outstanding Universal Value for humankind.
- The Stonehenge World Heritage Site encompasses one of the richest concentrations of prehistoric archaeological monuments in the world.

In this survey we will talk a lot about the surrounding World Heritage Landscape contains over 450 known archaeological monuments including:

- The Stonehenge Avenue - a 3km ceremonial avenue which links the River Avon to Stonehenge.
- The Cursus – a 3km ceremonial earthwork which predates Stonehenge.

Last year over 1.3 million people visited Stonehenge.

B1a. How familiar, if at all, were you with this information beforehand?

Please select one answer

Not at all familiar	Slightly familiar	Moderately familiar	Very familiar	Extremely familiar
1	2	3	4	5

NEW SCREEN

The interviewer will now hand over maps and images of the A303 as it currently is in the Stonehenge World Heritage Site.

INTERVIEWER TO HAND OVER B1 IMAGE AND B1 MAP

NEW SCREEN

The A303 road passes through the centre of the World Heritage Site about 165m (540ft) from the stone circle.

- The section of the A303 near Stonehenge is a single carriageway and at times suffers from severe congestion.
- Traffic on the road can be heard whilst walking around the stones and the wider landscape.

- Traffic on the road is visible from the stone circle, and the road passes through an otherwise high quality, open, rural landscape.
- Traffic on the road prevents visitors from moving freely across the World Heritage Site to the South which contains a number of other rare and important archaeological sites.
- Those travelling on the A303 enjoy clear views of Stonehenge
- The A303 also provides access to the site, and provides for local movement of goods and cars.
- The existing road is relatively rural in nature, and has little signage.

B1b. How familiar, if at all, were you with this information beforehand?

Please select one answer

Not at all familiar	Slightly familiar	Moderately familiar	Very familiar	Extremely familiar
1	2	3	4	5

B2. To what extent, if at all, do you think that the nearby A303 affects the following aspects of Stonehenge and the surrounding World Heritage Site landscape? Please indicate on the scale below.

Please select one answer per row

RANDOMISE ORDER OF SHOWING EACH STATEMENT

	The road has a negative impact	The road has a slightly negative impact	Neither negative nor beneficial	The road has a slightly beneficial impact	The road has a beneficial impact	Don't know
a. The setting of Stonehenge in the wider landscape	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. The quality of the experience of Stonehenge and the surrounding World Heritage Site	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. The view of Stonehenge from the road	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

In the past, different scenarios have been put forward to change the layout of the existing A303 road. Work is currently underway to develop a range of scenarios and a public consultation is planned for early 2017.

- We will provide you with information about **an alternative road scenario which would move the A303 road from its current position within the Stonehenge World Heritage Site.**
- **This is an indicative scenario which is presented here for the purposes of this hypothetical exercise only.**
- We remind you that this survey is not a public consultation.
- It is a targeted survey for assessing the benefit of removing the A303 from the area surrounding Stonehenge.

We would like you to imagine that two hypothetical scenarios exist for the A303 at Stonehenge.

A. Current situation: Leave the A303 road as it is.

B. A tunnel of approximately 2.9km (1.8 miles): Convert the A303 to a dual carriageway and construct a tunnel within the World Heritage Site through which the A303 road will pass, removing the A303 from its current surface route across part of the World Heritage Site. Construction of the tunnel would take around three years.

NEW SCREEN

The interviewer will now hand over maps and images of the Stonehenge World Heritage Site with the A303 rerouted.

INTERVIEWER TO HAND OVER B2 MAP AND B2 IMAGE

NEW SCREEN

This picture shows a view of the Stonehenge World Heritage Site if the A303 became a dual-carriageway with a tunnel of 2.9km (1.8 miles).

- The A303 within Stonehenge World Heritage Site would no longer be visible from Stonehenge.
- Reduced traffic noise whilst visiting the stones, which would make large areas of the World Heritage Site more tranquil.
- Removal of the A303 would reconnect the World Heritage Site to the north and south of the existing A303 allowing visitors to walk freely between Stonehenge and other archaeological sites in the World Heritage Site.
- Tunnel entrances would be constructed within the Stonehenge World Heritage site. These would not be visible from the stones but would be new visible features in the archaeological landscape, although the road would be carefully designed to reduce its impact as far as possible.
- Dual carriageway would lead up to the tunnel entrances, including the short sections inside the World Heritage site.
- Stonehenge would not be visible from the new A303 route.
- A route along the old A303 route would provide access for cyclists, horse riders and walkers.

NEW SCREEN

We have now shown you two hypothetical scenarios of:

A: The current A303 situation

B: A 2.9k (1.8 mile) tunnel option

Please read through this summary table which highlights the impacts associated with each option.

The interviewer will now hand over a summary table of the impacts associated with the current A303 and the 2.9k (1.8 mile) tunnel alternative.

INTERVIEWER TO HAND OVER B3 INFORMATION SHEET

Current A303 (Status Quo)	2.9km (1.8 mile) Tunnel Alternative
A303 runs 165 metres from stone circle	A303 removed from current location and redirected through tunnel
Single carriageway alongside Stonehenge monument, with some dual carriageway within the World Heritage Site	Dual carriageways will lead up to the tunnel entrances, including sections inside the World Heritage Site.
Traffic noise audible from stones	Less traffic noise audible from stones and an increase in tranquillity
Traffic visible from stones	No traffic visible from stones
No access to World Heritage Site to south of current A303	Reconnect the World Heritage Site to the north and south of the existing A303, allowing people to explore the whole landscape.
Stonehenge visible from A303	Stonehenge not visible from the new A303 route.

B3. How easy or difficult did you find this information to understand? Please indicate on the scale below, where 1 is not at all easy to understand, and 5 is very easy to understand?

Please select one answer

Not at all easy to understand	Very easy to understand			
1	2	3	4	5

For the next set of questions, please imagine a situation where the tunnel scenario was selected and was paid for by an increase in national taxes, for three years. Please think for a moment about how much the proposed scenario to remove the A303 from the World Heritage Site would be worth to you and your household, if anything.

B4. Would you be prepared to pay something, even if only a very small amount, to support the construction of a tunnel route?

Please select one answer

- Yes GO TO B5
- Maybe GO TO B5
- No GO TO B9

ASK ALL SAYING YES OR MAYBE AT B4

B5. Looking at the list of amounts below, what is the maximum you would be willing to pay per year, to support a tunnel route? This would be via an increase in your overall annual national taxes in each year of the three-year construction period, to support a tunnel route?

Studies have shown that many people answering surveys such as this one, say they are willing to pay more than they would actually be willing to pay in reality.

- Please think about this question as if it were a real decision and you were actually making a payment for real.
- Please do not agree to pay an amount if you think you cannot afford it;
- If you feel you have paid enough already;
- Or have other things to spend your money on.
- Also, this question is just about the proposed road scheme. *Remember, we are not asking you about how much you value the Stonehenge World Heritage Site*, we are asking you how much you would value taking the road out of part of the World Heritage Site.

Please select one answer

- £0 £2.50 £9 £22 £75
- £0.05 £3 £10 £25 £100

<input type="checkbox"/> £0.20	<input type="checkbox"/> £4	<input type="checkbox"/> £11	<input type="checkbox"/> £27	<input type="checkbox"/> £125
<input type="checkbox"/> £0.50	<input type="checkbox"/> £5	<input type="checkbox"/> £12	<input type="checkbox"/> £30	<input type="checkbox"/> £150
<input type="checkbox"/> £1	<input type="checkbox"/> £6	<input type="checkbox"/> £15	<input type="checkbox"/> £35	<input type="checkbox"/> £175
<input type="checkbox"/> £1.50	<input type="checkbox"/> £7	<input type="checkbox"/> £18	<input type="checkbox"/> £40	<input type="checkbox"/> £200
<input type="checkbox"/> £2	<input type="checkbox"/> £8	<input type="checkbox"/> £20	<input type="checkbox"/> £50	<input type="checkbox"/> Other amount £ _____

ASK SAYING YES OR MAYBE AT B4

B6. How certain are you that you would really pay this amount per year, for three years, in additional annual taxes if asked?

Please select one answer

Not certain at
all

Very certain

Don't know

1	2	3	4	5	6
---	---	---	---	---	---

ASK ALL STATING AN AMOUNT > £0 AT B5

B7. Below is a list of potential benefits of the proposed tunnel option for Stonehenge World Heritage Site. We would like to know which, if any, are the most important to you. Please rate the outcomes listed in terms of their importance to you.

Please select one answer per row

RANDOMISE ORDER OF STATEMENTS BELOW

	Not at all important	Slightly important	Important	Fairly important	Very important
a. Reduction of traffic noise/ tranquility of Stonehenge and the World Heritage Site	<input type="checkbox"/>				
b. No traffic visible from the stone circle at the Stonehenge World Heritage Site	<input type="checkbox"/>				
c. The ability to explore the whole Stonehenge World Heritage site and explore all its archaeological monuments without the land being divided by the road	<input type="checkbox"/>				
d. The removal of a modern road from a historic landscape	<input type="checkbox"/>				

ASK ALL STATING AN AMOUNT > £0 AT B5

B8. Which of the reasons below best describes your motivations for being prepared to pay an increase in annual taxes for the proposed tunnel scheme described to you?

Please read all options before selecting the one answer that best describes your opinion.

RANDOMISE ORDER OF ALL STATEMENTS EXCEPT 'OTHER'

Please select one answer

Reason that best describes your motivations to pay an increase in annual taxes	Please choose one reason only
I support the removal of the A303 from a historic landscape	<input type="checkbox"/>
The road spoils the tranquility of the Stonehenge World Heritage Site	<input type="checkbox"/>
The road is an eye sore when visiting the Stonehenge stone circle	<input type="checkbox"/>
People should have the opportunity to visit the whole of the Stonehenge World Heritage Site and explore all its archaeological monuments without the land severance caused by the road	<input type="checkbox"/>
Stonehenge is a national icon that should be protected	<input type="checkbox"/>
A dual carriage-way would relieve traffic congestion and reduce accidents	<input type="checkbox"/>
A new road would benefit local communities	<input type="checkbox"/>
I do not believe I would really have to pay	<input type="checkbox"/>
Other (please specify)	<input type="checkbox"/>
Don't know	<input type="checkbox"/>

ASK ALL NOT WILLING TO PAY ANYTHING [IF NO AT B4 OR £0 AT B5]

B9. You indicated that you would not be willing to pay any additional taxes to fund the rerouting of the A303. In a hypothetical situation, imagine that it was decided to proceed with the redirecting of the A303 from its current location. The A303 would be redirected and you would no longer be able to view Stonehenge from the road. How would it affect your overall level of life satisfaction if the A303 was removed from its current location?

Please select one answer REVERSE ORDER OF STATEMENT 1-3 VS 3-1 BETWEEN INTERVIEWS

- The removal of the A303 from its current location would have no significant effect on my life satisfaction – GO TO B11
- The removal of the A303 from its current location would reduce my life satisfaction - GO TO B10
- The removal of the A303 from its current location would increase my life satisfaction – GO TO B11

IF RESPONDENT SELECTED SCENARIO 2 IN B9: ‘The removal of the A303 from its current location would reduce my life satisfaction’

B10. You stated that the removal of the A303 from its current location would reduce your life satisfaction. Assuming nothing else in your life would change, imagine that in order to compensate you for not being able to use the A303 in its current location you were given a publically-funded cash compensation. How much money would you have to receive, as a one-off payment, to give you the same life satisfaction that you have now (not better or worse but just the same) once the A303 is removed from its current location? Note that whatever compensation amount you receive will mean that money cannot be used on other public services.

Please select one answer

<input type="checkbox"/> £0	<input type="checkbox"/> £2.50	<input type="checkbox"/> £9	<input type="checkbox"/> £22	<input type="checkbox"/> £75
<input type="checkbox"/> £0.05	<input type="checkbox"/> £3	<input type="checkbox"/> £10	<input type="checkbox"/> £25	<input type="checkbox"/> £100
<input type="checkbox"/> £0.20	<input type="checkbox"/> £4	<input type="checkbox"/> £11	<input type="checkbox"/> £27	<input type="checkbox"/> £125
<input type="checkbox"/> £0.50	<input type="checkbox"/> £5	<input type="checkbox"/> £12	<input type="checkbox"/> £30	<input type="checkbox"/> £150
<input type="checkbox"/> £1	<input type="checkbox"/> £6	<input type="checkbox"/> £15	<input type="checkbox"/> £35	<input type="checkbox"/> £175
<input type="checkbox"/> £1.50	<input type="checkbox"/> £7	<input type="checkbox"/> £18	<input type="checkbox"/> £40	<input type="checkbox"/> £200
<input type="checkbox"/> £2	<input type="checkbox"/> £8	<input type="checkbox"/> £20	<input type="checkbox"/> £50	<input type="checkbox"/> Other amount £_____

ASK ALL NOT WILLING TO PAY ANYTHING OR ACCEPT COMPENSATION [IF B9=1 OR B9=3 OR B10=£0]

B11. People have different reasons for saying they would not be willing to pay an increase in annual taxes [ONLY DISPLAY “or accept compensation” IF B10=£0] for a change to the current A303 at Stonehenge World Heritage Site. Which of the reasons below best describes why you chose not to pay?

Please read all options before selecting the one answer that best describes your opinion.

RANDOMISE ORDER OF ALL STATEMENTS EXCEPT ‘OTHER’

Please select one answer

Reason that best describes why you chose not to pay	<u>Please choose one reason only</u>
I have more important things to think about	<input type="checkbox"/>
I would prefer to keep the A303 in its current location but do not require compensation	<input type="checkbox"/>
There should be a longer tunnel scenario	<input type="checkbox"/>
I am not willing to pay increased taxes over a period of three years	<input type="checkbox"/>

Reason that best describes why you chose not to pay	<i>Please choose <u>one</u> reason only</i>
We should be reducing road use, not building more roads	<input type="checkbox"/>
Any changes to the road layout should be paid for through local council tax	<input type="checkbox"/>
Any changes to the road layout should be paid for through road tax	<input type="checkbox"/>
Any changes to the road layout should be paid for through voluntary donations	<input type="checkbox"/>
Any changes to the road layout should be paid for through increases in visitor fees	<input type="checkbox"/>
I do not care about Stonehenge	<input type="checkbox"/>
I do not feel confident stating a value that I would be willing to pay in the current uncertain political climate Other (please specify)	<input type="checkbox"/>
Other (please specify)	<input type="checkbox"/>
Don't know	<input type="checkbox"/>

C. Demographics

Finally, we would like to ask you a few questions about yourself to help us understand the profile of our respondents. The survey is anonymous and all information provided is strictly confidential. It will be used for statistical purposes only.

C1. How many children under the age of 16 live in your household?

Please select one answer

- 0 1 2 3 4 5 6 7 8 9 10+ children

(DROP DOWN BOX 0-10+)

C2. What is your legal marital status?

Please select one answer

- | | | |
|--|--|---|
| <input type="checkbox"/> Single and never married or never in a legally recognised Civil Partnership | <input type="checkbox"/> Separated but legally married/ in a same-sex civil partnership | <input type="checkbox"/> Widowed/ surviving civil partner |
| <input type="checkbox"/> Married | <input type="checkbox"/> Divorced/dissolved civil partnership | <input type="checkbox"/> Co-habiting |
| <input type="checkbox"/> A Civil Partner in a legally recognised Civil Partnership | <input type="checkbox"/> Former Civil Partner | <input type="checkbox"/> Rather not say |

C3. What is your highest educational level or qualification?

Please select one answer

- | | | |
|---|---|--|
| <input type="checkbox"/> No formal educational qualifications | <input type="checkbox"/> A level/HNC/HND/etc. | <input type="checkbox"/> College/University degree |
| <input type="checkbox"/> O level/GCSE/GCE | <input type="checkbox"/> Professional qualification | <input type="checkbox"/> Higher degree (Master's, Doctorate) |
| | | <input type="checkbox"/> Rather not say |

C4. Which of the following best describes your current work status?

Please select one answer

- | | | |
|--|--|---|
| <input type="checkbox"/> Self-employed | <input type="checkbox"/> Looking after the family/home | <input type="checkbox"/> Long-term sick or disabled |
| <input type="checkbox"/> Employed full-time (>30hrs/week) | <input type="checkbox"/> Retired from paid work | <input type="checkbox"/> Unemployed |
| <input type="checkbox"/> Employed part-time (<=30hrs/week) | <input type="checkbox"/> Temporarily sick or injured | <input type="checkbox"/> Rather not say |
| <input type="checkbox"/> Student | | |

C5. What is your ethnicity?

Please select one answer

- | | |
|--|---|
| <input type="checkbox"/> Asian / Asian British | <input type="checkbox"/> White Other |
| <input type="checkbox"/> Black / African / Caribbean / Black British | <input type="checkbox"/> Other ethnic group |
| <input type="checkbox"/> Mixed / Multiple ethnic groups | <input type="checkbox"/> Rather not say |
| <input type="checkbox"/> White British | |

C6. In general, would you say your health is

Please select one answer

Excellent	Very Good	Good	Fair	Poor	Rather not say
-----------	-----------	------	------	------	----------------

C7. How would you describe your religious/spiritual belief?

Please select one answer

- | | | |
|--|-----------------------------------|---|
| <input type="checkbox"/> Not religious | <input type="checkbox"/> Buddhist | <input type="checkbox"/> Other |
| <input type="checkbox"/> Christian | <input type="checkbox"/> Hindu | <input type="checkbox"/> Don't know |
| <input type="checkbox"/> Muslim | <input type="checkbox"/> Pagan | <input type="checkbox"/> Rather not say |

C8. Which of the following best describes your total annual household income before tax?

Please select one answer

- | | | | |
|---|---|---|---|
| <input type="checkbox"/> £0–14,999 | <input type="checkbox"/> £30,000–39,999 | <input type="checkbox"/> £60,000–79,999 | <input type="checkbox"/> £150,000 + |
| <input type="checkbox"/> £15,000–19,999 | <input type="checkbox"/> £40,000–49,999 | <input type="checkbox"/> £80,000–99,999 | <input type="checkbox"/> Rather not say |
| <input type="checkbox"/> £20,000–29,999 | <input type="checkbox"/> £50,000–59,999 | <input type="checkbox"/> £100,000- £149,999 | |

C9. Do you have a full UK driving license?

Please select one answer

- Yes
- No
- Don't know
- Rather not say

C10. Have you or any member of your family ever benefited from Stonehenge or English Heritage in terms of employment or other direct economic benefits?

Please select one answer

- Yes
- No
- Don't know

C11. What is your postcode? This information will be used for analysis purpose only. You will not be re-contacted following this survey. This information is entirely confidential. If you prefer you can give the first half of your postcode (e.g. L23).

This is the end of the survey.

Thank you very much for your time!

A.3 Stonehenge B Road User Survey

Stonehenge Road User Survey

Intro:

Highways England is looking at possible ways of resolving issues with the A303. The A303 runs through the Stonehenge World Heritage Site and is part of the national road network. We want to understand people's thoughts about removing the road from the Stonehenge site. We would like to ask you questions about your use of the A303 road and views of an alternative transport scenario to the current A303 within the Stonehenge World Heritage Site. We would be grateful if you could spare about 15 minutes to answer some questions. You do not need any previous knowledge of the Stonehenge World Heritage Site or the road network. The survey is anonymous and all information provided is strictly confidential. I would also stress that this survey is not a public consultation. We are simply exploring views of possible solutions to address issues caused to the Stonehenge World Heritage Site by the A303.

SC1 Can I just confirm that you have understood the information we have provided about the background and purpose of this survey?

- Yes (1)
- No (2)

SC2 Would you be willing to help with this survey?

- Yes (1)
- No (2)

If No Is Selected, Then Skip To Unfortunately we will not be able to ...

SQ Many thanks. We would like to start with a few questions just to confirm that you are eligible for the survey. The questions on this page are to ensure that we access a UK representative sample by gender, age group and region. If the survey ends for you after these questions, it is because we have reached our quota for respondents with similar characteristics.

SQ1 Are you currently resident in the UK?

- Yes (1)
- No (2)

If No Is Selected, Then Skip To Unfortunately we will not be able to ...

SQ2 What is your age group?

- Under 16 years old (1)
- 16 - 19 years old (2)
- 20 - 24 years old (3)
- 25 - 29 years old (4)
- 30 - 34 years old (5)
- 35 - 39 years old (6)
- 40 - 44 years old (7)
- 45 - 49 years old (8)
- 50 - 54 years old (9)
- 55 - 59 years old (10)
- 60 - 64 years old (11)
- 65 - 69 years old (12)
- 70 - 74 years old (13)
- 75 - 79 years old (14)
- 80 - 84 years old (15)
- Over 84 years old (16)

If Under 16 years old Is Selected, Then Skip To Unfortunately we will not be able to ...

SQ3 Do you currently live within 50 miles of Stonehenge World Heritage Site?

- Yes (1)
- No (2)

SQ4 In the past 12 months have you used the A303 between Amesbury and Winterbourne Stoke, in either direction, i.e. the section passing Stonehenge? By use, we mean as a driver or passenger, for personal or business purposes.

- Yes (1)
- No (2)

Q2 Does anyone in your household own a car or van?

- Yes (1)
- No (2)

Q1 What is your gender?

- Male (1)
- Female (2)
- Other (3)

Answer If Are you currently resident in the UK? No Is Selected Or What is your age group? Under 16 years old Is Selected Or Would you be willing to help with this survey? No Is Selected

Q110 Unfortunately we will not be able to use your responses in our survey today as we have reached our quota for respondents with similar characteristics. Thank you very much for your time today.

A1 We would like to ask some questions about your use of the A303 road, specifically the section between Amesbury and Winterbourne Stoke on average, in either direction, i.e. the section passing Stonehenge? How often do you travel on the A303 between Amesbury and Winterbourne Stoke on average, in either direction, i.e. the section passing Stonehenge? By travel, we mean as a driver or passenger.

- More often than once a week (14)
- Less often than once a week but more than once a month (15)
- Less often than once a month but more than once a year (16)
- Less often than once a year (17)
- I have never travelled along that road (18)
- Don't know (19)

If I have never travelled alone... Is Selected, Then Skip To End Of Block

A2 In the past, when you have travelled on the A303 between Amesbury and Winterbourne Stoke on average, did you most commonly travel as: (PLEASE CHOOSE ONLY ONE OPTION)

- Driver (24)
- Passenger (25)
- Mixed: Either driver or passenger (26)
- Other (please specify) (27) _____
- Don't know (28)

A3 What is the usual purpose of your journey (i.e. the most common reason for traveling) on the A303 between Amesbury and Winterbourne Stoke, i.e. the section passing Stonehenge? By travel, we mean as a driver or passenger.

- Traveling to work (commuting) (19)
- Personal / recreation (20)
- Business / employment (e.g. taxi driving, agricultural) (21)
- Freight / commercial (i.e. goods transport) (22)
- Other (please specify) (23) _____

A4 On average, what is your usual journey time (how long your journey takes) when traveling in either direction on the A303 between Amesbury and Winterbourne Stoke, i.e. the section passing Stonehenge? By travel, we mean as a driver or passenger.

- 1 - 5 minutes (4)
- 6 - 15 minutes (5)
- 16 - 30 minutes (6)
- 31 - 45 minutes (7)
- 46 – 60 minutes (one hour) (8)
- An hour – an hour and a half (60 – 90 minutes) (9)
- Up to two hours (10)
- More than two hours (11)

A5 Have you ever chosen to drive via the A303 in order to pass by and view Stonehenge from the road?

- Never (9)
- Once (10)
- Sometimes (11)
- Often (12)
- Always (13)

A6 On average, what is your usual journey distance (how far do you travel) when traveling in either direction on the A303 between Amesbury and Winterbourne Stoke, i.e. the section passing Stonehenge? By travel, we mean as a driver or passenger.

- 1 - 5 miles (1.6 - 9 km) (4)
- 6 - 10 miles (10 – 16 km) (5)
- 11 - 15 miles (17 – 24 km) (6)
- 16 – 20 miles (25 – 32 km) (7)
- 21 – 30 miles (33 – 48 km) (8)
- More than 30 miles (49 km) (9)
- Don't know (10)

A7 How often, if ever, have you experienced congestion while traveling on the A303 between Amesbury and Winterbourne Stoke on average, in either direction, i.e. the section passing Stonehenge?

- Never (3)
- Rarely (4)
- Sometimes (5)
- Often (6)
- Always (7)
- Don't know (8)

We would now like to ask some questions about your views on the Stonehenge World Heritage Site.

A8 How many times, if any, have you visited the Stonehenge World Heritage Site in your lifetime? By 'visited' we mean exploring the landscape, paying to visit the stone circle or walking or cycling in the area.

- 0 (1)
- 1 (2)
- 2 (3)
- 3 (4)
- 4 (5)
- 5 (6)
- 6 (7)
- 7 (8)
- 8 (9)
- 9 (10)
- 10+ (11)

A9 Apart from the stone circle, are you familiar with the other archaeological monuments in the Stonehenge World Heritage Site?

- Yes (1)
- No (2)

A10 How likely is it that you will visit Stonehenge in the future, on a scale of 1 to 5 where 1 is 'not at all likely' and 5 is 'very likely'?

- Not at all likely 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- Very likely 5 (7)

A11 Have you previously visited any other World Heritage Sites in the UK? (apart from Stonehenge, e.g., Blenheim Palace, Canterbury Cathedral, Neolithic Orkney etc.)?

- Yes (4)
- No (5)
- Don't know (6)

A12 To what extent do you disagree or agree with the following statements about the Stonehenge World Heritage Site (Stonehenge)? Please select one answer per row

	Strongly disagree (4)	Disagree (5)	Neither agree nor disagree (6)	Agree (7)	Strongly agree (3)
Stonehenge is one of the most important heritage sites in the UK (21)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stonehenge has a value only for those who actually visit it (22)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stonehenge should be protected for future generations (23)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other monuments within the World Heritage Site surrounding the Stonehenge stone circle should be equally protected (24)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I don't think that Stonehenge has any inherent value (25)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

A13 If the A303 were removed from its current location you would no longer be able to see Stonehenge whilst travelling past by car, coach, or bus. To what extent, if at all, would you miss seeing Stonehenge whilst travelling along the road, on a scale of 1 to 5 where 1 is 'not miss at all' and 5 is 'miss a lot'?

- Not miss at all 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- Miss a lot 5 (5)
- Don't know (6)

A14 We would like to ask you some questions about heritage and culture. In the last 12 months, have you been to any of these? (PLEASE SELECT ALL THAT APPLY)

- Dance event (4)
- Event connected with books or writing (5)
- Exhibition or collection of art, photography or sculpture (6)
- Film at a cinema or other venue (7)
- Heritage site visit (8)
- Music event (9)
- Opera / operetta (10)
- Theatre (Play, drama or musical) (11)
- Other cultural event (please specify) (12) _____

A15 Are you a member of a heritage, conservation or environmental organisation?

- No (4)
- Member of a Stonehenge preservation organisation (5)
- Member of the English Heritage (6)
- Member of the National Trust or Historic England (7)
- Member of other organisation. If so, please provide name(s): (8) _____

A16 We would like to ask you about your preferences for how public spending is allocated. Public spending is allocated to several areas. In your opinion, what are the TOP 5 areas where public funds should be spent?

- Education (4)
- Environment (5)
- Health care (6)
- Heritage (7)
- Libraries, arts, museums and culture (8)
- Housing (9)
- International aid/development (10)
- Defence (11)
- Pensions (12)
- Public order and safety (13)
- Sport (14)
- The economy (15)
- Transport (16)
- Don't know (17)

IntroBb

In this section we will present information about a possible change in the roads layout in the area. We remind you that this survey is not a public consultation. It is part of a targeted survey for assessing the effect of removing the A303 from the surrounding area around Stonehenge. Stonehenge is one of the 29 UK sites that have been designated a United Nations World Heritage Site, making it of Outstanding Universal Value for humankind. The Stonehenge World Heritage Site encompasses one of the richest concentrations of prehistoric archaeological monuments in the world. In this survey we will talk a lot about the surrounding World Heritage Landscape contains over 450 known archaeological monuments including: The Stonehenge Avenue - a 3km ceremonial avenue which links the River Avon to Stonehenge. The Cursus – a 3km ceremonial earthwork which predates Stonehenge. Last year over 1.3 million people visited Stonehenge.

B1 How familiar, if at all, were you with this information beforehand?

- Not at all familiar 1 (1)
- Slightly familiar 2 (2)
- Moderately familiar 3 (3)
- Very familiar 4 (4)
- Extremely familiar 5 (5)

The A303 road passes through the centre of the World Heritage Site about 165m (540ft) from the stone circle. The section of the A303 near Stonehenge is a single carriageway and at times suffers from severe congestion. Traffic on the road can be heard whilst walking around the stones and the wider landscape. Traffic on the road is visible from the stone circle, and the road passes through an otherwise high quality, open, rural landscape. Traffic on the road prevents visitors from moving freely across the World Heritage Site to the South which contains a number of other rare and important archaeological sites. Those travelling on the A303 enjoy clear views of Stonehenge. The A303 also provides access to the site, and provides for local movement of goods and cars. The existing road is relatively rural in nature, and has little signage.

Image of the current location of the A303 within the Stonehenge World Heritage Site

Map of the current location of the A303 within the Stonehenge World Heritage Site.

B2 How familiar, if at all, were you with this information beforehand?

- Not at all familiar 1 (1)
- Slightly familiar 2 (2)
- Moderately familiar 3 (3)
- Very familiar 4 (4)
- Extremely familiar 5 (5)

B2 To what extent, if at all, do you think that the nearby A303 affects the following aspects of Stonehenge and the surrounding World Heritage Site landscape? Please indicate on the scale below.

	The road has a negative impact (1)	The road has a slightly negative impact (2)	Neither negative nor beneficial (3)	The road has a slightly beneficial impact (4)	The road has a beneficial impact (5)	Don't know (6)
The setting of Stonehenge in the wider landscape (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The quality of the experience of Stonehenge and the surrounding World Heritage Site (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The view of Stonehenge from the road (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q87 In the past, different scenarios have been put forward to change the layout of the existing A303 road. Work is currently underway to develop a range of scenarios and a public consultation is planned for early 2017. We will provide you with information about an alternative road scenario which would move the A303 road from its current position within the Stonehenge World Heritage Site. This is an indicative scenario which is presented here for the purposes of this hypothetical exercise only. We remind you that this survey is not a public consultation. It is a targeted survey for assessing the benefit of removing the A303 from the area surrounding Stonehenge. We would like you to imagine that two hypothetical scenarios exist for the A303 at Stonehenge. A. Current situation: Leave the A303 road as it is. B. A tunnel of approximately 2.9km (1.8 miles): Convert the A303 to a dual carriageway and construct a tunnel within the World Heritage Site through which the A303 road will pass, removing the A303 from its current surface route across part of the World Heritage Site. Construction of the tunnel would take around three years. Representation of an indicative alternative route for the A303 tunnel. Note that the tunnel portals are indicated as a range over a broad area within the World Heritage Site (hatched circles on the map). The route of the western approach road to the tunnel is also represented as a range (shaded area between dotted lines).

The pictures below show a view of the Stonehenge World Heritage Site if the A303 became a dual-carriageway with a tunnel of 2.9km (1.8 miles). The A303 within Stonehenge World Heritage Site would no longer be visible from Stonehenge. Reduced traffic noise whilst visiting the stones, which would make large areas of the World Heritage Site more tranquil. Removal of the A303 would reconnect the World Heritage Site to the north and south of the existing A303 allowing visitors to walk freely between Stonehenge and other archaeological sites in the World Heritage Site. Tunnel entrances would be constructed within the Stonehenge World Heritage site. These would not be visible from the stones but would be new visible features in the archaeological landscape, although the road would be carefully designed to reduce its impact as far as possible. Dual carriageway would lead up to the tunnel entrances, including the short sections inside the World Heritage site. Stonehenge would not be visible from the new A303 route. A route along the old A303 route would provide access for cyclists, horse riders and walkers.

Representation of the Stonehenge World Heritage Site with the A303 removed.

B3 Impacts associated with current A303 (do nothing) and the 2.9km tunnel option Current A303 (Status Quo) 2.9km Tunnel Alternative A303 runs 165 metres from stone circle A303 removed from current location and redirected through tunnel Single carriageway alongside Stonehenge monument, with some dual carriageway within the World Heritage Site Dual carriageways will lead up to the tunnel entrances, including sections inside the World Heritage Site. Traffic noise audible from stones Less traffic noise audible from stones and an increase in tranquillity Traffic visible from stones No traffic visible from stones No access to World Heritage Site to south of current A303 Reconnect the World Heritage Site to the north and south of the existing A303, allowing people to explore the whole landscape. Stonehenge visible from A303 Stonehenge not visible from the new A303 route. How easy or difficult did you find this information to understand? Please indicate on the scale below, where 1 is not at all easy to understand, and 5 is very easy to understand?

- Not at all easy to understand 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- Very easy to understand 5 (5)

B4 For the next set of questions, please imagine a situation where the tunnel scenario was selected and was paid for by an increase in national taxes, for three years. Please think for a moment about how much the proposed scenario to remove the A303 from the World Heritage Site would be worth to you and your household, if anything. Would you be prepared to pay something, even if only a very small amount, to support the construction of a tunnel route?

- Yes (1)
- Maybe (3)
- No (4)

If No Is Selected, Then Skip To You indicated that you would not be w...

B5 Looking at the list of amounts below, what is the maximum you would be willing to pay per year, to support a tunnel route? This would be via an increase in your annual taxes in each year of the three-year construction period. Studies have shown that many people answering surveys such as this one, say they are willing to pay more than they would actually be willing to pay in reality. Please think about this question as if it were a real decision and you were actually making a payment for real. Please do not agree to pay an amount if you think you cannot afford it; If you feel you have paid enough already; Or have other things to spend your money on. Also, this question is just about the proposed road scheme. Remember, we are not asking you about how much you value the Stonehenge World Heritage Site, we are asking you how much you would value taking the road out of part of the World Heritage Site.

- £0 (1)
- £0.05 (61)
- £0.20 (2)
- £0.50 (3)
- £1 (31)
- £1.50 (32)
- £2 (34)
- £2.50 (35)
- £3 (36)
- £4 (37)
- £5 (38)
- £6 (39)
- £7 (40)
- £8 (41)
- £9 (4)
- £10 (5)
- £10 (42)
- £11 (43)
- £12 (44)
- £15 (45)
- £18 (46)
- £20 (47)
- £22 (48)
- £25 (49)
- £27 (17)
- £30 (50)
- £35 (51)
- £40 (52)
- £50 (53)
- £75 (54)
- £100 (55)
- £125 (56)
- £150 (57)
- £175 (58)
- £200 (59)
- Other amount (60) _____

B6 How certain are you that you would really pay this amount per year, for 3 years, in additional annual taxes if asked?

- Not certain at all 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- Very certain 5 (5)
- Don't know (6)

Answer If Looking at the list of amounts below, what is the maximum you would be willing to pay per year, i... £0 Is Not Selected

B7 Below is a list of potential benefits of the proposed tunnel option for Stonehenge World Heritage Site. We would like to know which are the most important to you. Please rate the outcomes listed in terms of their importance to you.

	Not at all important (2)	Slightly important (3)	Important (4)	Fairly important (5)	Very important (6)
Reduction of traffic noise/ tranquility of Stonehenge and the World Heritage Site (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No traffic visible from the stone circle at the Stonehenge World Heritage Site (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The ability to explore the whole Stonehenge World Heritage site and explore all its archaeological monuments without the land being divided by the road (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The removal of a modern road from a historic landscape (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Answer If Looking at the list of amounts below, what is the maximum you would be willing to pay per year, i... £0 Is Not Selected

B8 Which of the reasons below best describes your motivations for being prepared to pay an increase in annual taxes for the proposed tunnel scheme described to you? (Choose one only)

- I support the removal of the A303 from a historic landscape (4)
- The road spoils the tranquility of the Stonehenge World Heritage Site (5)
- The road is an eye sore when visiting the Stonehenge stone circle (6)
- People should have the opportunity to visit the whole of the Stonehenge World Heritage Site and explore all its archaeological monuments without the land being divided by the road (7)
- Stonehenge is a national icon that should be protected (8)
- A dual carriage-way would relieve traffic congestion and reduce accidents (9)
- A new road would benefit local communities (10)
- I do not believe I would really have to pay (11)
- Other (please specify) (12) _____
- Don't know (13)

Answer If For the next set of questions, please imagine a situation where the tunnel scenario was selected and was paid for by an increase in national taxes, leading to a reduction in your disposable in... No Is Selected Or Looking at the list of amounts below, what is the maximum you would be willing to pay per year, i... £0 Is Selected

B9 You indicated that you would not be willing to pay any additional taxes to fund the rerouting of the A303. In a hypothetical situation, imagine that it was decided to proceed with the redirecting of the A303 from its current location. The A303 would be redirected and you would no longer be able to view Stonehenge from the road. How would it affect your overall level of life satisfaction if the A303 was removed from its current location?

- The removal of the A303 from its current location would have no significant effect on my life satisfaction (4)
- The removal of the A303 from its current location would reduce my life satisfaction (5)
- The removal of the A303 from its current location would increase my life satisfaction (6)

If The removal of the A303 fro... Is Selected, Then Skip To End of Block
If The removal of the A303 fro... Is Selected, Then Skip To You stated that the removal of the A3...If The removal of the A303 fro... Is Selected, Then Skip To End of Block

Answer If You indicated that you would not be willing to pay any additional taxes to fund the rerouting of the A303. In a hypothetical situation, imagine that it was decided to proceed with the redirecting o... The removal of the A303 from its current location would reduce my life satisfaction Is Selected

B10 You stated that the removal of the A303 from its current location would reduce your life satisfaction. Assuming nothing else in your life would change, imagine that in order to compensate you for not being able to use the A303 in its current location you were given a publicly funded cash compensation. How much money would you have to receive, as a one-off payment, to give you the same life satisfaction that you have now (not better or worse but just the same) once the A303 is removed from its current location? Note that whatever compensation amount you receive will mean that money cannot be used on other public services.

- £0 (36)
- £0.05 (70)
- £0.20 (37)
- £0.50 (38)
- £1 (39)
- £1.50 (40)
- £2 (41)
- £2.50 (42)
- £3 (43)
- £4 (44)
- £5 (45)
- £6 (46)
- £7 (47)
- £8 (48)
- £9 (49)
- £10 (50)
- £11 (51)
- £12 (52)
- £15 (53)
- £18 (54)
- £20 (55)
- £22 (56)
- £25 (57)
- £27 (58)
- £30 (59)
- £35 (60)
- £40 (61)
- £50 (62)
- £75 (63)
- £100 (64)
- £125 (65)
- £150 (66)
- £175 (67)
- £200 (68)
- Other amount (69) _____

Answer If You indicated that you would not be willing to pay any additional taxes to fund the rerouting of the A303. In a hypothetical situation, imagine that it was decided to proceed with the redirecting o... The removal of the A303 from its current location would have no significant effect on my life satisfaction Is Selected Or You indicated that you would not be willing to pay any additional taxes to fund the rerouting of the A303. In a hypothetical situation, imagine that it was decided to proceed with the redirecting o... The removal of the A303 from its current location would increase my life satisfaction Is Selected Or You stated that the removal of the A303 from its current location would reduce your life satisfaction... £0 Is Selected

B11 People have different reasons for saying they would not be willing to pay an increase in annual taxes for a change to the current A303 at Stonehenge World Heritage Site. Which of the reasons below best describes why you chose not to pay? (Choose one only) Reason that best describes why you chose not to pay. Please choose one reason only

- I have more important things to think about (4)
- I would prefer to keep the A303 in its current location but do not require compensation (5)
- There should be a longer tunnel scenario (6)
- I am not willing to pay increased taxes over a period of three years (7)
- We should be reducing road use, not building more roads (8)
- Any changes to the road layout should be paid for through local council tax (9)
- Any changes to the road layout should be paid for through road tax (10)
- Any changes to the road layout should be paid for through voluntary donations (11)
- Any changes to the road layout should be paid for through increases in visitor fees (12)
- I do not care about Stonehenge (13)
- I do not feel confident stating a value that I would be willing to pay in the current uncertain political climate (14)
- Other (please specify) (15) _____
- Don't know (16)

C Finally, we would like to ask you a few questions about yourself to help us understand the profile of our respondents. The survey is anonymous and all information provided is strictly confidential. It will be used for statistical purposes only.

C1 How many children under the age of 16 live in your household?

- 0 (1)
- 1 (2)
- 2 (3)
- 3 (4)
- 4 (5)
- 5 (6)
- 6 (7)
- 7 (8)
- 8 (9)
- 9 (10)
- 10+ (11)

C2 What is your legal marital status?

- Single and never married or never in a legally recognised Civil Partnership (1)
- Married (2)
- A Civil Partner in a legally recognised Civil Partnership (3)
- Separated but legally married/ in a civil partnership (4)
- Divorced/dissolved civil partnership (5)
- Former Civil Partner (6)
- Widowed/ surviving civil partner (7)
- Co-habiting (8)
- Rather not say (9)

C3 What is your highest educational level or qualification?

- No formal educational qualifications (1)
- O level/GCSE/GCE (2)
- A level/HNC/HND/etc (3)
- Professional qualification (4)
- College/University degree (5)
- Higher degree (Master's, Doctorate) (6)
- Rather not say (7)

C4 Which of the following best describes your current work status?

- Self-employed (1)
- Employed full-time (>30hrs/week) (2)
- Employed part-time (3)
- Student (4)
- Looking after the family/home (5)
- Retired from paid work (6)
- Temporarily sick or injured (7)
- Long-term sick or disabled (8)
- Unemployed (9)
- Rather not say (10)

C5 What is your ethnicity?

- Asian / Asian British (4)
- Black / African / Caribbean / Black British (6)
- Mixed / Multiple ethnic groups (8)
- White British (9)
- White Other (10)
- Other ethnic group (2)
- Rather not say (1)

C6 In general, would you say your health is...

- Excellent (4)
- Very good (5)
- Good (3)
- Fair (2)
- Poor (1)
- Rather not say (6)

C7 How would you describe your religious/spiritual belief?

- Not religious (1)
- Christian (2)
- Muslim (3)
- Buddhist (4)
- Hindu (5)
- Paganism (6)
- Other (7)
- Don't know (8)
- Rather not say (9)

C8 Which of the following best describes your total annual household income before tax?

- £0–14,999 (1)
- £15,000–19,999 (2)
- £20,000–29,999 (3)
- £30,000–39,999 (4)
- £40,000–49,999 (5)
- £50,000–59,999 (6)
- £60,000–79,999 (7)
- £80,000–99,999 (9)
- £100,000- £149,999 (10)
- £150,000 + (11)
- Rather not say (12)

C9 Do you have a valid UK driving license?

- Yes (1)
- No (2)
- Don't know (3)
- Rather not say (4)

C10 Have you or any member of your family ever benefited from Stonehenge or English Heritage in terms of employment or other direct economic benefits?

- Yes (1)
- No (2)
- Don't know (3)

C11 What is your postcode? This information will be used for analysis purpose only. You will not be re-contacted following this survey. This information is entirely confidential. If you prefer you can give the first half of your postcode (e.g. L23)

End This is the end of the survey. We thank you very much for your time!

A.4 General Population Survey

Stonehenge General Population Survey

Intro

Highways England is looking at possible ways of resolving issues with the A303. The A303 runs through the Stonehenge World Heritage Site and is part of the national road network. We want to understand people's thoughts about removing the road from the Stonehenge site. We would like to ask you questions about your use of the A303 road and views of an alternative transport scenario to the current A303 within the Stonehenge World Heritage Site. We would be grateful if you could spare about 15 minutes to answer some questions. You do not need any previous knowledge of the Stonehenge World Heritage Site or the road network. The survey is anonymous and all information provided is strictly confidential. I would also stress that this survey is not a public consultation. We are simply exploring views of possible solutions to address issues caused to the Stonehenge World Heritage Site by the A303.

SC1 Can I just confirm that you have understood the information we have provided about the background and purpose of this survey?

- Yes (1)
- No (2)

SC2 Would you be willing to help with this survey?

- Yes (1)
- No (2)

If No Is Selected, Then Skip To Unfortunately we will not be able to ...

SQ Many thanks. We would like to start with a few questions just to confirm that you are eligible for the survey. The questions on this page are to ensure that we access a UK representative sample by gender, age group and region. If the survey ends for you after these questions, it is because we have reached our quota for respondents with similar characteristics.

SQ1 Are you currently resident in the UK?

- Yes (1)
- No (2)

If No Is Selected, Then Skip To Unfortunately we will not be able to ...

SQ2 What is your age group?

- Under 16 years old (1)
- 16 - 19 years old (2)
- 20 - 24 years old (3)
- 25 - 29 years old (4)
- 30 - 34 years old (5)
- 35 - 39 years old (6)
- 40 - 44 years old (7)
- 45 - 49 years old (8)
- 50 - 54 years old (9)
- 55 - 59 years old (10)
- 60 - 64 years old (11)
- 65 - 69 years old (12)
- 70 - 74 years old (13)
- 75 - 79 years old (14)
- 80 - 84 years old (15)
- Over 84 years old (16)

If Under 16 years old Is Selected, Then Skip To Unfortunately we will not be able to ...

SQ3 Please select your postcode area (the first one or two letters of your full postcode):

- AB (17)
- AL (18)
- B (19)
- BA (20)
- BB (21)
- BD (22)
- BH (23)
- BL (24)
- BN (25)
- BR (26)
- BS (27)
- BT (28)
- CA (29)
- CB (30)
- CF (31)
- CH (32)
- CM (33)
- CO (34)
- CR (35)
- CT (36)
- CV (37)
- CW (38)
- DA (39)
- DD (40)
- DE (41)
- DG (42)
- DH (43)
- DL (44)
- DN (45)
- DT (46)
- DY (47)
- E (48)
- EC (49)
- EH (50)
- EN (51)
- EX (52)
- FK (53)
- FY (54)
- G (55)
- GL (56)
- GU (57)
- HA (58)
- HD (59)
- HG (60)
- HP (61)

- HR (62)
- HS (63)
- HU (64)
- HX (65)
- IG (66)
- IP (67)
- IV (68)
- KA (69)
- KT (70)
- KW (71)
- KY (72)
- L (73)
- LA (74)
- LD (75)
- LE (76)
- LL (77)
- LN (78)
- LS (79)
- LU (80)
- M (81)
- ME (82)
- MK (83)
- ML (84)
- N (85)
- NE (86)
- NG (87)
- NN (88)
- NP (89)
- NR (90)
- NW (91)
- OL (92)
- OX (93)
- PA (94)
- PE (95)
- PH (96)
- PL (97)
- PO (98)
- PR (99)
- RG (100)
- RH (101)
- RM (102)
- S (103)
- SA (104)
- SE (105)
- SG (106)
- SK (107)
- SL (108)

- SM (109)
- SN (110)
- SO (111)
- SP (112)
- SR (113)
- SS (114)
- ST (115)
- SW (116)
- SY (117)
- TA (118)
- TD (119)
- TF (120)
- TN (121)
- TQ (122)
- TR (123)
- TS (124)
- TW (125)
- UB (126)
- W (127)
- WA (128)
- WC (129)
- WD (130)
- WF (131)
- WN (132)
- WR (133)
- WS (134)
- WV (135)
- YO (136)
- ZE (137)
- BT (138)

Q1 What is your gender?

- Male (1)
- Female (2)
- Other (3)

Answer If Are you currently resident in the UK? No Is Selected Or What is your age group? Under 16 years old Is Selected Or Do you currently live within 50 miles of Stonehenge World Heritage Site? No Is Selected Or In the past 12 months have you used the A303 between Amesbury and Winterbourne Stoke, in either direction? No Is Selected Or Based on the

information provided, would you be willing to help with this survey?<o:p></o:p>
No Is Selected

Q110 Unfortunately we will not be able to use your responses in our survey today as we have reached our quota for respondents with similar characteristics. Thank you very much for your time today.

A14 We would like to ask you some questions about heritage and culture. In the last 12 months, have you been to any of these? (PLEASE SELECT ALL THAT APPLY)

- Dance event (4)
- Event connected with books or writing (5)
- Exhibition or collection of art, photography or sculpture (6)
- Film at a cinema or other venue (7)
- Heritage site visit (8)
- Music event (9)
- Opera / operetta (10)
- Theatre (Play, drama or musical) (11)
- Other cultural event (please specify) (12) _____

A15 Are you a member of a heritage, conservation or environmental organisation?

- No (4)
- Member of a Stonehenge preservation organisation (5)
- Member of the English Heritage (6)
- Member of the National Trust or Historic England (7)
- Member of other organisation. If so, please provide name(s): (8) _____

Q2 Does anyone in your household own a car or van?

- Yes (1)
- No (2)

We would now like to ask some questions about your views on the Stonehenge World Heritage Site.

A8 How many times, if any, have you visited the Stonehenge World Heritage Site in your lifetime? By 'visited' we mean exploring the landscape, paying to visit the stone circle or walking or cycling in the area.

- 0 (1)
- 1 (2)
- 2 (3)
- 3 (4)
- 4 (5)
- 5 (6)
- 6 (7)

- 7 (8)
- 8 (9)
- 9 (10)
- 10+ (11)

A9 Apart from the stone circle, are you familiar with the other archaeological monuments in the Stonehenge World Heritage Site?

- Yes (1)
- No (2)

A10 How likely is it that you will visit Stonehenge in the future, on a scale of 1 to 5 where 1 is 'not at all likely' and 5 is 'very likely'?

- Not at all likely 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- Very likely 5 (7)

A11 Have you previously visited any other World Heritage Sites in the UK? (apart from Stonehenge, e.g., Blenheim Palace, Canterbury Cathedral, Neolithic Orkney etc.)?

- Yes (4)
- No (5)
- Don't know (6)

A12 To what extent do you disagree or agree with the following statements about the Stonehenge World Heritage Site (Stonehenge)? Please select one answer per row

	Strongly disagree (4))	Disagree (5)	Neither agree nor disagree (6)	Agree (7)	Strongly agree (3)
Stonehenge is one of the most important heritage sites in the UK (21)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stonehenge has a value only for those who actually visit it (22)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stonehenge should be protected for future generations (23)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other monuments within the World Heritage Site surrounding the Stonehenge stone circle should be equally protected (24)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I don't think that Stonehenge has any inherent value (25)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

SQ4 We would like to ask some questions about your use of the A303 road, specifically the section between Amesbury and Winterbourne Stoke on average, in either direction, i.e. the section passing Stonehenge? In the past 12 months have you used the A303 between Amesbury and Winterbourne Stoke, in either direction, i.e. the section passing Stonehenge? By use, we mean as a driver or passenger, for personal or business purposes.

- Yes (1)
- No (2)
- Don't know (3)

If No Is Selected, Then Skip To If the A303 were removed from its cur...If Don't know Is Selected, Then Skip To If the A303 were removed from its cur...

A1 How often do you travel on the A303 between Amesbury and Winterbourne Stoke on average, in either direction, i.e. the section passing Stonehenge? By travel, we mean as a driver or passenger.

- More often than once a week (14)
- Less often than once a week but more than once a month (15)
- Less often than once a month but more than once a year (16)
- Less often than once a year (17)
- I have never travelled along that road (18)
- Don't know (19)

If I have never travelled alon... Is Selected, Then Skip To If the A303 were removed from its cur...

A3 What is the usual purpose of your journey (i.e. the most common reason for traveling) on the A303 between Amesbury and Winterbourne Stoke, i.e. the section passing Stonehenge? By travel, we mean as a driver or passenger.

- Traveling to work (commuting) (19)
- Personal / recreation (20)
- Business / employment (e.g. taxi driving, agricultural) (21)
- Freight / commercial (i.e. goods transport) (22)
- Other (please specify) (23) _____

A4 On average, what is your usual journey time (how long your journey takes) when traveling in either direction on the A303 between Amesbury and Winterbourne Stoke, i.e. the section passing Stonehenge? By travel, we mean as a driver or passenger.

- 1 - 5 minutes (4)
- 6 - 15 minutes (5)
- 16 - 30 minutes (6)
- 31 - 45 minutes (7)
- 46 – 60 minutes (one hour) (8)
- An hour – an hour and a half (60 – 90 minutes) (9)
- Up to two hours (10)
- More than two hours (11)

A5 Have you ever chosen to drive via the A303 in order to pass by and view Stonehenge from the road?

- Never (9)
- Once (10)
- Sometimes (11)
- Often (12)
- Always (13)

A6 On average, what is your usual journey distance (how far do you travel) when traveling in either direction on the A303 between Amesbury and Winterbourne Stoke, i.e. the section passing Stonehenge? By travel, we mean as a driver or passenger.

- 1 - 5 miles (1.6 - 9 km) (4)
- 6 - 10 miles (10 – 16 km) (5)
- 11 - 15 miles (17 – 24 km) (6)
- 16 – 20 miles (25 – 32 km) (7)
- 21 – 30 miles (33 – 48 km) (8)
- More than 30 miles (49 km) (9)
- Don't know (10)

A7 How often, if ever, have you experienced congestion while traveling on the A303 between Amesbury and Winterbourne Stoke on average, in either direction, i.e. the section passing Stonehenge?

- Never (3)
- Rarely (4)
- Sometimes (5)
- Often (6)
- Always (7)
- Don't know (8)

A13 If the A303 were removed from its current location you would no longer be able to see Stonehenge whilst travelling past by car, coach, or bus. To what extent, if at all, would you miss seeing Stonehenge whilst travelling along the road, on a scale of 1 to 5 where 1 is 'not miss at all' and 5 is 'miss a lot'?

- Not miss at all 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- Miss a lot 5 (5)
- Don't know (6)

A16 We would like to ask you about your preferences for how public spending is allocated. Public spending is allocated to several areas. In your opinion, what are the TOP 5 areas where public funds should be spent?

- Education (4)
- Environment (5)
- Health care (6)
- Heritage (7)
- Libraries, arts, museums and culture (8)
- Housing (9)
- International aid/development (10)
- Defence (11)
- Pensions (12)
- Public order and safety (13)
- Sport (14)
- The economy (15)
- Transport (16)
- Don't know (17)

IntroBb

In this section we will present information about a possible change in the roads layout in the area. We remind you that this survey is not a public consultation. It is part of a targeted survey for assessing the effect of removing the A303 from the surrounding area around Stonehenge. Stonehenge is one of the 29 UK sites that have been designated a United Nations World Heritage Site, making it of Outstanding Universal Value for humankind. The Stonehenge World Heritage Site encompasses one of the richest concentrations of prehistoric archaeological monuments in the world. In this survey we will talk a lot about the surrounding World Heritage Landscape contains over 450 known archaeological monuments including: The Stonehenge Avenue - a 3km ceremonial avenue which links the River Avon to Stonehenge. The Cursus – a 3km ceremonial earthwork which predates Stonehenge. Last year over 1.3 million people visited Stonehenge.

B1 How familiar, if at all, were you with this information beforehand?

- Not at all familiar 1 (1)
- Slightly familiar 2 (2)
- Moderately familiar 3 (3)
- Very familiar 4 (4)
- Extremely familiar 5 (5)

The A303 road passes through the centre of the World Heritage Site about 165m (540ft) from the stone circle. The section of the A303 near Stonehenge is a single carriageway and at times suffers from severe congestion. Traffic on the road can be heard whilst walking around the stones and the wider landscape. Traffic on the road is visible from the stone circle, and the road passes through an otherwise high quality, open, rural landscape. Traffic on the road prevents visitors from moving freely across the World Heritage Site to the South which contains a number of other rare and important archaeological sites. Those travelling on the A303 enjoy clear views

of Stonehenge. The A303 also provides access to the site, and provides for local movement of goods and cars. The existing road is relatively rural in nature, and has little signage.

Image of the current location of the A303 within the Stonehenge World Heritage Site

Map of the current location of the A303 within the Stonehenge World Heritage Site.

B2 How familiar, if at all, were you with this information beforehand?

- Not at all familiar 1 (1)
- Slightly familiar 2 (2)
- Moderately familiar 3 (3)
- Very familiar 4 (4)
- Extremely familiar 5 (5)

B2 To what extent, if at all, do you think that the nearby A303 affects the following aspects of Stonehenge and the surrounding World Heritage Site landscape? Please indicate on the scale below.

	The road has a negative impact (1)	The road has a slightly negative impact (2)	Neither negative nor beneficial (3)	The road has a slightly beneficial impact (4)	The road has a beneficial impact (5)	Don't know (6)
The setting of Stonehenge in the wider landscape (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The quality of the experience of Stonehenge and the surrounding World Heritage Site (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The view of Stonehenge from the road (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q87 In the past, different scenarios have been put forward to change the layout of the existing A303 road. Work is currently underway to develop a range of scenarios and a public consultation is planned for early 2017. We will provide you with information about an alternative road scenario which would move the A303 road from its current position within the Stonehenge World Heritage Site. This is an indicative scenario which is presented here for the purposes of this hypothetical exercise only. We remind you that this survey is not a public consultation. It is a targeted survey for assessing the benefit of removing the A303 from the area surrounding Stonehenge. We would like you to imagine that two hypothetical scenarios exist for the A303 at Stonehenge. A. Current situation: Leave the A303 road as it is. B. A tunnel of approximately 2.9km (1.8 miles): Convert the A303 to a dual carriageway and construct a tunnel within the World Heritage Site through which the A303 road will pass, removing the A303 from its current surface route across part of the World Heritage Site. Construction of the tunnel would take around three years. Representation of an indicative alternative route for the A303 tunnel. Note that the tunnel portals are indicated as a range over a broad area within the World Heritage Site (hatched circles on the map). The route of the western approach road to the tunnel is also represented as a range (shaded area between dotted lines).

The pictures below show a view of the Stonehenge World Heritage Site if the A303 became a dual-carriageway with a tunnel of 2.9km (1.8 miles). The A303 within Stonehenge World Heritage Site would no longer be visible from Stonehenge. Reduced traffic noise whilst visiting the stones, which would make large areas of the World Heritage Site more tranquil. Removal of the A303 would reconnect the World Heritage Site to the north and south of the existing A303 allowing visitors to walk freely between Stonehenge and other archaeological sites in the World Heritage Site. Tunnel entrances would be constructed within the Stonehenge World Heritage site. These would not be visible from the stones but would be new visible features in the archaeological landscape, although the road would be carefully designed to reduce its impact as far as possible. Dual carriageway would lead up to the tunnel entrances, including the short sections inside the World Heritage site. Stonehenge would not be visible from the new A303 route. A route along the old A303 route would provide access for cyclists, horse riders and walkers.

Representation of the Stonehenge World Heritage Site with the A303 removed.

B3 Impacts associated with current A303 (do nothing) and the 2.9km tunnel option Current A303 (Status Quo) 2.9km Tunnel Alternative A303 runs 165 metres from stone circle
A303 removed from current location and redirected through tunnel Single carriageway alongside Stonehenge monument, with some dual carriageway within the World Heritage Site
Dual carriageways will lead up to the tunnel entrances, including sections inside the World Heritage Site. Traffic noise audible from stones Less traffic noise audible from stones and an increase in tranquillity Traffic visible from stones No traffic visible from stones
No access to World Heritage Site to south of current A303 Reconnect the World Heritage Site to the north and south of the existing A303, allowing people to explore the whole landscape.
Stonehenge visible from A303 Stonehenge not visible from the new A303 route. How easy or difficult did you find this information to understand? Please indicate on the scale below, where 1 is not at all easy to understand, and 5 is very easy to understand?

- Not at all easy to understand 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- Very easy to understand 5 (5)

B4 For the next set of questions, please imagine a situation where the tunnel scenario was selected and was paid for by an increase in national taxes, for three years. Please think for a moment about how much the proposed scenario to remove the A303 from the World Heritage Site would be worth to you and your household, if anything. Would you be prepared to pay something, even if only a very small amount, to support the construction of a tunnel route?

- Yes (1)
- Maybe (3)
- No (4)

If No Is Selected, Then Skip To You indicated that you would not be w...

B5 Looking at the list of amounts below, what is the maximum you would be willing to pay per year, to support a tunnel route? This would be via an increase in your annual taxes in each year of the three-year construction period. Studies have shown that many people answering surveys such as this one, say they are willing to pay more than they would actually be willing to pay in reality. Please think about this question as if it were a real decision and you were actually making a payment for real. Please do not agree to pay an amount if you think you cannot afford it; If you feel you have paid enough already; Or have other things to spend your money on. Also, this question is just about the proposed road scheme. Remember, we are not asking you about how much you value the Stonehenge World Heritage Site, we are asking you how much you would value taking the road out of part of the World Heritage Site.

- £0 (1)
- £0.05 (61)
- £0.20 (2)
- £0.50 (3)
- £1 (31)
- £1.50 (32)
- £2 (34)
- £2.50 (35)
- £3 (36)
- £4 (37)
- £5 (38)
- £6 (39)
- £7 (40)
- £8 (41)
- £9 (4)
- £10 (5)
- £10 (42)
- £11 (43)
- £12 (44)
- £15 (45)
- £18 (46)
- £20 (47)
- £22 (48)
- £25 (49)
- £27 (17)
- £30 (50)
- £35 (51)
- £40 (52)
- £50 (53)
- £75 (54)
- £100 (55)
- £125 (56)
- £150 (57)
- £175 (58)
- £200 (59)
- Other amount (60) _____

B6 How certain are you that you would really pay this amount per year, for 3 years, in additional annual taxes if asked?

- Not certain at all 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- Very certain 5 (5)
- Don't know (6)

Answer If Looking at the list of amounts below, what is the maximum you would be willing to pay per year, i... £0 Is Not Selected

B7 Below is a list of potential benefits of the proposed tunnel option for Stonehenge World Heritage Site. We would like to know which are the most important to you. Please rate the outcomes listed in terms of their importance to you.

	Not at all important (2)	Slightly important (3)	Important (4)	Fairly important (5)	Very important (6)
Reduction of traffic noise/ tranquility of Stonehenge and the World Heritage Site (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No traffic visible from the stone circle at the Stonehenge World Heritage Site (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The ability to explore the whole Stonehenge World Heritage site and explore all its archaeological monuments without the land being divided by the road (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The removal of a modern road from a historic landscape (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Answer If Looking at the list of amounts below, what is the maximum you would be willing to pay per year, i... £0 Is Not Selected

B8 Which of the reasons below best describes your motivations for being prepared to pay an increase in annual taxes for the proposed tunnel scheme described to you? (Choose one only)

- I support the removal of the A303 from a historic landscape (4)
- The road spoils the tranquility of the Stonehenge World Heritage Site (5)
- The road is an eye sore when visiting the Stonehenge stone circle (6)
- People should have the opportunity to visit the whole of the Stonehenge World Heritage Site and explore all its archaeological monuments without the land being divided by the road (7)
- Stonehenge is a national icon that should be protected (8)
- A dual carriage-way would relieve traffic congestion and reduce accidents (9)
- A new road would benefit local communities (10)
- I do not believe I would really have to pay (11)
- Other (please specify) (12) _____
- Don't know (13)

Answer If For the next set of questions, please imagine a situation where the tunnel scenario was selected and was paid for by an increase in national taxes, leading to a reduction in your disposable in... No Is Selected Or Looking at the list of amounts below, what is the maximum you would be willing to pay per year, i... £0 Is Selected

B9 You indicated that you would not be willing to pay any additional taxes to fund the rerouting of the A303. In a hypothetical situation, imagine that it was decided to proceed with the redirecting of the A303 from its current location. The A303 would be redirected and you would no longer be able to view Stonehenge from the road. How would it affect your overall level of life satisfaction if the A303 was removed from its current location?

- The removal of the A303 from its current location would have no significant effect on my life satisfaction (4)
- The removal of the A303 from its current location would reduce my life satisfaction (5)
- The removal of the A303 from its current location would increase my life satisfaction (6)

If The removal of the A303 fro... Is Selected, Then Skip To End of Block
If The removal of the A303 fro... Is Selected, Then Skip To You stated that the removal of the A3...If The removal of the A303 fro... Is Selected, Then Skip To End of Block

Answer If You indicated that you would not be willing to pay any additional taxes to fund the rerouting of the A303. In a hypothetical situation, imagine that it was decided to proceed with the redirecting o... The removal of the A303 from its current location would reduce my life satisfaction Is Selected

B10 You stated that the removal of the A303 from its current location would reduce your life satisfaction. Assuming nothing else in your life would change, imagine that in order to compensate you for not being able to use the A303 in its current location you were given a publicly funded cash compensation. How much money would you have to receive, as a one-off payment, to give you the same life satisfaction that you have now (not better or worse but just the same) once the A303 is removed from its current location? Note that whatever compensation amount you receive will mean that money cannot be used on other public services.

- £0 (36)
- £0.05 (70)
- £0.20 (37)
- £0.50 (38)
- £1 (39)
- £1.50 (40)
- £2 (41)
- £2.50 (42)
- £3 (43)
- £4 (44)
- £5 (45)
- £6 (46)
- £7 (47)
- £8 (48)
- £9 (49)
- £10 (50)
- £11 (51)
- £12 (52)
- £15 (53)
- £18 (54)
- £20 (55)
- £22 (56)
- £25 (57)
- £27 (58)
- £30 (59)
- £35 (60)
- £40 (61)
- £50 (62)
- £75 (63)
- £100 (64)
- £125 (65)
- £150 (66)
- £175 (67)
- £200 (68)
- Other amount (69) _____

Answer If You indicated that you would not be willing to pay any additional taxes to fund the rerouting of the A303. In a hypothetical situation, imagine that it was decided to proceed with the redirecting o... The removal of the A303 from its current location would have no significant effect on my life satisfaction Is Selected Or You indicated that you would not be willing to pay any additional taxes to fund the rerouting of the A303. In a hypothetical situation, imagine that it was decided to proceed with the redirecting o... The removal of the A303 from its current location would increase my life satisfaction Is Selected Or You stated that the removal of the A303 from its current location would reduce your life satisfac... £0 Is Selected

B11 People have different reasons for saying they would not be willing to pay an increase in annual taxes \${e://Field/comp} for a change to the current A303 at Stonehenge World Heritage Site. Which of the reasons below best describes why you chose not to pay? (Choose one only) Reason that best describes why you chose not to pay. Please choose one reason only

- I have more important things to think about (4)
- I would prefer to keep the A303 in its current location but do not require compensation (5)
- There should be a longer tunnel scenario (6)
- I am not willing to pay increased taxes over a period of three years (7)
- We should be reducing road use, not building more roads (8)
- Any changes to the road layout should be paid for through local council tax (9)
- Any changes to the road layout should be paid for through road tax (10)
- Any changes to the road layout should be paid for through voluntary donations (11)
- Any changes to the road layout should be paid for through increases in visitor fees (12)
- I do not care about Stonehenge (13)
- I do not feel confident stating a value that I would be willing to pay in the current uncertain political climate (14)
- Other (please specify) (15) _____
- Don't know (16)

C Finally, we would like to ask you a few questions about yourself to help us understand the profile of our respondents. The survey is anonymous and all information provided is strictly confidential. It will be used for statistical purposes only.

C1 How many children under the age of 16 live in your household?

- 0 (1)
- 1 (2)
- 2 (3)
- 3 (4)
- 4 (5)
- 5 (6)
- 6 (7)
- 7 (8)
- 8 (9)
- 9 (10)
- 10+ (11)

C2 What is your legal marital status?

- Single and never married or never in a legally recognised Civil Partnership (1)
- Married (2)
- A Civil Partner in a legally recognised Civil Partnership (3)
- Separated but legally married/ in a civil partnership (4)
- Divorced/dissolved civil partnership (5)
- Former Civil Partner (6)
- Widowed/ surviving civil partner (7)
- Co-habiting (8)
- Rather not say (9)

C3 What is your highest educational level or qualification?

- No formal educational qualifications (1)
- O level/GCSE/GCE (2)
- A level/HNC/HND/etc (3)
- Professional qualification (4)
- College/University degree (5)
- Higher degree (Master's, Doctorate) (6)
- Rather not say (7)

C4 Which of the following best describes your current work status?

- Self-employed (1)
- Employed full-time (>30hrs/week) (2)
- Employed part-time (3)
- Student (4)
- Looking after the family/home (5)
- Retired from paid work (6)
- Temporarily sick or injured (7)
- Long-term sick or disabled (8)
- Unemployed (9)
- Rather not say (10)

C5 What is your ethnicity?

- Asian / Asian British (4)
- Black / African / Caribbean / Black British (6)
- Mixed / Multiple ethnic groups (8)
- White British (9)
- White Other (10)
- Other ethnic group (2)
- Rather not say (1)

C6 In general, would you say your health is...

- Excellent (4)
- Very good (5)
- Good (3)
- Fair (2)
- Poor (1)
- Rather not say (6)

C7 How would you describe your religious/spiritual belief?

- Not religious (1)
- Christian (2)
- Muslim (3)
- Buddhist (4)
- Hindu (5)
- Paganism (6)
- Other (7)
- Don't know (8)
- Rather not say (9)

C8 Which of the following best describes your total annual household income before tax?

- £0–14,999 (1)
- £15,000–19,999 (2)
- £20,000–29,999 (3)
- £30,000–39,999 (4)
- £40,000–49,999 (5)
- £50,000–59,999 (6)
- £60,000–79,999 (7)
- £80,000–99,999 (9)
- £100,000- £149,999 (10)
- £150,000 + (11)
- Rather not say (12)

C9 Do you have a valid UK driving license?

- Yes (1)
- No (2)
- Don't know (3)
- Rather not say (4)

C10 Have you or any member of your family ever benefited from Stonehenge or English Heritage in terms of employment or other direct economic benefits?

- Yes (1)
- No (2)
- Don't know (3)

C11 What is your postcode? This information will be used for analysis purpose only. You will not be re-contacted following this survey. This information is entirely confidential. If you prefer you can give the first half of your postcode (e.g. L23)

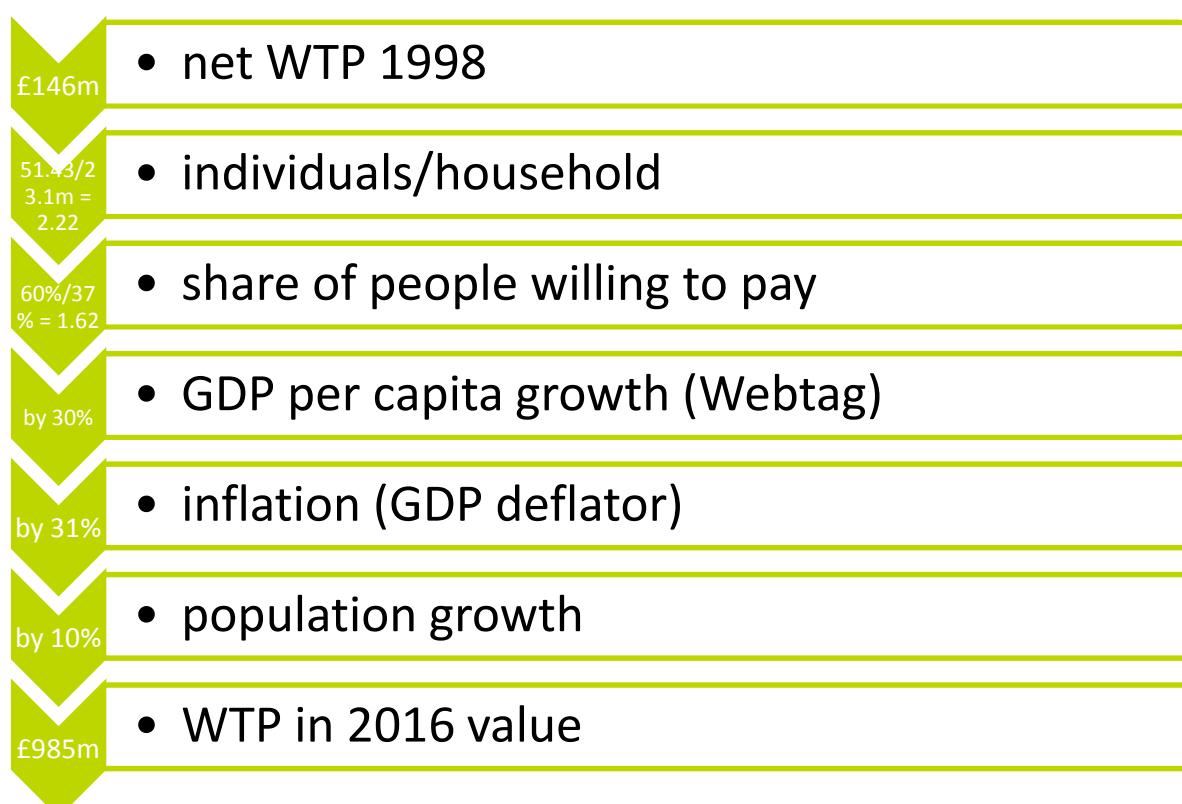
End This is the end of the survey. We thank you very much for your time!

Appendix B Comparing the results with the Mourato/Maddison study

The Mourato/Maddison study undertaken in 1998 calculated a net WTP of £149m. In nominal terms this is a substantially lower value than estimated in this study. A number of factors help to explain the difference. In the 1998 study about 37% of individuals were willing to pay for the removal of the road and construction of a 2km long tunnel. In the current study 67.4% (visitors and road users) and 59.2% General population were willing to pay (for the purpose of the comparison we aggregate this to about 60%). The Mourato Maddison study aggregated the WTP to 23.1 million households compared to 51.43m individuals in the Simetrica study. Real GDP has grown by 31% since 1998 (Webtag guidance), inflation of 30% (Webtag GDP deflator) and the population by about 10%.

The resulting value of £1bn is just below the confidence interval of £1.189 to £1.462bn for the Simetrica 2016 study. In addition to the quantified differences used above, it has to be noted that the Mourato and Maddison study conducted a total of 357 interviews, of these 129 on site. The current study has about 3400 respondents, with more than 400 on site, making it more robust with a smaller variance. In addition, attitudes towards heritage will have changed raising the value the population puts in cultural heritage and the proposal has changed from a 2km tunnel to a 2.9km tunnel.

Overall the quantifiable differences calculated a 2016 value in the following way (some rounding):



Appendix C Report of the Survey Pilots

C.1 Pilot - Visitor Survey

Stonehenge Visitor Survey - Pilot Debrief questions 12th September 2016

We performed a pilot survey at the Stonehenge site on 12th September 2016. The pilot was performed under identical conditions to the full survey, with professional interviewers, delivered on pads, and with visual aids. The only difference to the full survey was the absence of shelter, chairs and tables which visual materials could be placed on. We obtained 16 completed pilot surveys with n=15 follow-up debrief questions.

- In terms of **length**, 53% (n=8) found the survey length okay, while 27% (n=4) found the survey a little long, and 20% (n=3) found it very long.
- In terms of **difficulty**, all respondents found the survey either okay (80%; n=12) or very easy (20%; n=3).
- 100% of respondents indicates that they had **enough information** on the purpose and aims of the survey.
- 100% of respondents found the **photos and map images** of Stonehenge and the alternative road schemes helpful for answering this survey.

We asked specific questions about the valuation section.

For the WTP question, 47% (n=7) found the scenario of an increase in annual taxes to support the alternative road scheme realistic. 27% (n=4) found the taxation scenario unrealistic, while 27% (n=4) did not know.

In terms of **sensitivity**, (n=2) respondents indicated that they found some of the questions personal or sensitive. Of these, one indicated that they did not like answering questions about their income. The other indicated that they found the tax question private and didn't want to discuss this.

Table 1 shows that **100% of respondents felt they had enough information about the Stonehenge World Heritage Site, the existing route of the A303, and the impacts associated with the existing route of the A303.** 13% (n=2) indicated that they would have liked more information on the 2.9km tunnel scheme and the impacts associated with the 2.9km tunnel scheme. No respondents indicated that they would like less information for any aspect of the information provided in the valuation section of the survey.

Table 1 – Respondents provided with sufficient information on different aspects of the survey

	Yes – I had <u>ENOUGH</u> information	I would have liked <u>MORE</u> information	I would have liked <u>LESS</u> information
The Stonehenge World Heritage Site	15	0	0
The existing route of the A303	15	0	0
The impacts associated with the existing route of the A303	15	0	0
The 2.9km tunnel scheme	13	2	0
The impacts associated with the 2.9km tunnel scheme	13	2	0

Willingness to pay range

We asked if the range of payment amounts shown in the WTP payment ladder was adequate, in terms of the number of values shown and the range of values. Of those who answered the WTP question (n=12), **92% (n=11)** indicated that the payment range was adequate, with one person indicating they would have liked a wider range of values.

We asked individuals if their stated annual WTP taxation value was for themselves (as an individual) or their whole household. This question was also asked in the WTP range-testing question. Of those who answered the WTP question (n=16), 56% (n=9) indicated that the WTP was for themselves as an individual, while 38% (n=6) indicated that their WTP was for their household. One respondent indicated they their stated WTP referred to neither. These pilot findings lead us to conclude that the WTP taxation question can be interpreted as either an individual or a household value, with the majority of respondents stating an individual-level WTP value.

In the pilot survey data 80% (n=16) indicated that they would or would maybe be willing to pay an increase in annual taxes over the three year construction period to support the tunnel scheme (Table 2).

Table 2 WTP Annual Tax – Yes/Maybe/No

	N.	%
Yes	6	30.00
Maybe	10	50.00
No	4	20.00
Total	20	100.00

We tested the range provided in the payment ladder though the pilot survey.

The raw mean WTP an increase in annual taxes for the alternative (tunnel) road scheme across n=20 respondents was £13.75¹. Aggregated over the course of the construction period this amounts to a mean WTP of £41.25 per individual visitor.

This is a realistic WTP value, which aligns with the previous contingent valuation study at Stonehenge, which found that 35% of households were willing to pay an extra £18.50 over the next two years to construct the proposed tunnel, while 58% of households were willing to pay £7.40 for the next two years to construct the tunnel. We also note that this our initial estimate is based only on pilot data of n=16 respondents.

Of those who indicated that they would or would maybe be willing to pay, 20% (n=4) then went on to give a zero response.

Table 3 shows the range of values given by respondents. We see 11 WTP values of £5 or less, 3 values between £10-£25, and two maximum values at £50. There were no values closer to the maximum WTP value. 62% (n=8) were certain or very certain in their stated WTP value.

These findings lead us to conclude that the WTP payment ladder range is set realistically for the visitor population.

Table 3 WTP Annual Tax – Value range

WTP	N.	%
£0.00	3	18.75
£1.00	1	6.25
£2.50	2	12.50
£3.00	1	6.25
£5.00	4	25.00
£10.00	1	6.25

¹ WTP values coded as mid-point intervals for calculation of mean WTP.

WTP	N.	%
£20.00	1	6.25
£25.00	1	6.25
£50.00	2	12.50
Total	16	100.00

When we recode No responses as £0 WTP values, we find that the mean WTP an annual tax to support the tunnel scheme is £10.75. Note that this is the final approach that will be used to estimate mean WTP in the full dataset.

We also collected four additional surveys with individuals who had not participated in the full pilot (n=4). These individuals were provided with the same information from the willingness to pay question in the valuation section of the survey. We asked them an open-end question on their WTP an annual tax over three years for the tunnel option. WTP elicited ranged between 5p, £5 and £30 (mean £10). We then presented these respondents with the payment ladder questions. Maximum WTP ranged from £5 to £30 and £50 (mean £22.50).

These values indicate that the payment ladder value range are set accurately, with the potential for some additional lower level figures. Based on these findings we included a lower figure of £0.05p in the final payment ladder.

Familiarity and opinion questions

We found that on 5% of respondents (n=1) were very familiar with the information about Stonehenge. In contrast, 40% (n=8) were very or extremely familiar with the information about the current A303 road.

- 70% (n=14) felt that the A303 has a negative or slightly negative effect on the **setting of Stonehenge in the wider landscape.**
- 75% (n=15) felt that the A303 has a negative or slightly negative effect on the **quality of the experience of Stonehenge and the surrounding WHS**
- 47% (n=9) felt that the A303 has a negative or slightly negative effect on the **view of Stonehenge from the road.**
- 26% (n=5) felt the A303 had a beneficial or slightly beneficial effect on the **view of Stonehenge from the road**

85% (n=17) found the information about the two road scenarios easy or very easy to understand.

In terms of the benefits associated with the different road options:

- 84% (n=11) found the **reduction of traffic noise/ tranquility** of Stonehenge and the World Heritage Site fairly or very important
- 54% (n=7) found **having no traffic visible from the stone circle** at the Stonehenge World Heritage Site fairly or very important

- 56% (n=10) found the **ability to explore the whole Stonehenge World Heritage site** and explore all its archaeological monuments without the land being divided by the road fairly or very important
- 54% (n=7) found the **removal of a modern road from a historic landscape** fairly or very important

Table 4 shows the reasons people gave for being willing to pay an increase in taxes.

Reason that best describes your motivations to pay an increase in annual taxes	<u>Please choose one reason only</u>
I support the removal of the A303 from a historic landscape	0
The road spoils the tranquility of the Stonehenge World Heritage Site	23% (n=3)
The road is an eye sore when visiting the Stonehenge stone circle	0
People should have the opportunity to visit the whole of the Stonehenge World Heritage Site and explore all its archaeological monuments without the land severance caused by the road	31% (n=4)
Stonehenge is a national icon that should be protected	23% (n=3)
A dual carriage-way would relieve traffic congestion and reduce accidents	23% (n=3)
A new road would benefit local communities	0
I do not believe I would really have to pay	0
Other (please specify)	0
Don't know	0

Willingness to accept range

We asked how realistic respondents found the willingness to accept compensation question. Of those who answered this question (n=4) 100% indicated that they didn't find the scenario realistic.

This question was asked to those who said they would not be willing to pay to support the tunnel scheme, or gave a £0 response when asked. In the pilot data, only 2 of the 20 respondents indicated that the removal of the road would reduce their life satisfaction.

Table 5 - Removal of A303 would reduce life satisfaction

Removal of the A303 on Life Satisfaction	
Decrease	2
Increase	1
No significant effect	4
Total	7
Observations	7

Those two individuals each gave a WTA value of £200. This is the highest value available in the payment card.

These findings suggest that:

A) Respondents are having some trouble with their understanding of the WTA compensation question.

B) The fact that individuals are consistently selecting the highest compensation amount may suggest that the WTA range needs to be set higher.

However, we note that this finding is based on a very small sample of n=2.

There is also the risk that we might be witnessing compensation WTA bias, whereby respondents always choose the higher figure. This may be accentuated by hypothetical bias generated by the ambiguity in the compensation question.

There is a further risk in providing a wider payment range for the WTA question, that, having seen the previous payment ladder (those who answered Yes/Maybe, but then £0 response) could potentially influence stated WTA, priming respondents to think that they have should select a higher amount.

We note that the compensation value in the WTA question is a one off (lifetime) compensation amount for the loss of the road. In the final analysis, we would aggregate WTA values across the remaining lifetime of the respondent (eg £200/35 years = £5.71 annual compensation).

Also note that when we recode No responses (n=4) as zero for the WTA compensation value we obtain a mean WTA of £66.67.

For this reason we suggest adding the following text to the compensation question (underlined):

B10. You stated that the removal of the A303 from its current location would reduce your life satisfaction. Assuming nothing else in your life would change, imagine that in order to compensate you for not being able to use the A303 in its current location you were given a publically-funded cash compensation. How much money would you have to receive, as a one-off payment, to give you the same life satisfaction that you have now (not better or worse but just the same) once the A303 is removed from its current location? Note that whatever compensation amount you receive will mean that that money cannot be used on other public services.

C.2 Stonehenge Local Population (Road User) Pilot Debrief questions 14-15th September 2016

We performed a pilot survey of the online road user survey using a panel of n=50 individuals living within 50 miles of Stonehenge and who had used the A303 between Amesbury and Winterbourne Stoke in the last 12 months. The pilot road user survey was performed over 14th-15th September 2016. The pilot was performed under identical conditions to the full survey. We obtained 57 completed pilot surveys and 54 completed debrief questions.

- In terms of **length**, 85% (n=46) found the survey length okay, while 13% (n=7) found the survey a little long, and none found it very long. One individual found the survey length to be very short
- In terms of **difficulty**, 63% (n=34) found the survey either okay or very easy (21%; n=11).
- 87% of respondents (n=47) indicates that they had **enough information** on the purpose and aims of the survey.
- 91% of respondents (n=49) found the **photos and map images** of Stonehenge and the alternative road schemes helpful for answering this survey.

We asked specific questions about the valuation section.

For the WTP question, 60% (n=32) found the scenario of an increase in annual taxes to support the alternative road scheme realistic. 24% (n=13) found the taxation scenario unrealistic, while 17% (n=9) did not know.

In terms of **sensitivity**, (n=10) respondents indicated that they found some of the questions personal or sensitive. Of these, one indicated that he/she did not like answering questions about their income. The other indicated that he/she did not like answering his/her postcode. Two respondents answered n/a.

Table 1 shows that **93% of respondents felt they had enough information about the Stonehenge World Heritage Site.** **91% of respondents felt that they had enough information about the existing route of the A303.** **94% of respondents felt that they had enough information about the impacts associated with the existing route of the A303.** 17% (n=9) indicated that they would have liked more information on the 2.9km tunnel scheme and 20% (n=11) reported that they would have liked more information on the impacts associated with the 2.9km tunnel scheme. No respondents indicated that they would like less information for any aspect of the information provided in the valuation section of the survey.

Table 1 – Respondents provided with sufficient information on different aspects of the survey

	Yes – I had <u>ENOUGH</u> information	I would have liked <u>MORE</u> information	I would have liked <u>LESS</u> information
The Stonehenge World Heritage Site	50	4	0
The existing route of the A303	49	5	0
The impacts associated with the existing route of the A303	51	3	0
The 2.9km tunnel scheme	45	9	0
The impacts associated with the 2.9km tunnel scheme	42	11	1

Willingness to pay range

We asked if the range of payment amounts shown in the WTP payment ladder was adequate, in terms of the number of values shown and the range of values. **78% (n=42) indicated that the payment range was adequate.** 9% (n=5) indicated that they would have liked a wider range of values. 6% n=3 indicated that they would have liked more values of a lower amount, while 7% (n=4) indicated that they would have liked more values of a higher amount.

We asked individuals if their stated annual WTP taxation value was for themselves (as an individual) or their whole household. This question was also asked in the WTP range-testing question. Of those who answered the WTP question (n=39), 45% (n=24) indicated that the WTP was for themselves as an individual, while 33% (n=13) indicated that their WTP was for their household. Two respondent indicated that they did not know or were not sure. These pilot findings lead us to conclude that the WTP taxation question can be interpreted as either an individual or a household value, with the majority of respondents stating an individual-level WTP value.

In the pilot survey data 74% (n=42) indicated that they would or would maybe be willing to pay an increase in annual taxes over the three year construction period to support the tunnel scheme (Table 2).

Table 2 WTP Annual Tax – Yes/Maybe/No

	N.	%
Yes	18	31.58
Maybe	24	42.11
No	15	26.32
Total	57	100.00

We tested the range provided in the payment ladder though the pilot survey.

The raw mean WTP an increase in annual taxes for the alternative (tunnel) road scheme across n=20 respondents was £14.92². Aggregated over the course of the construction period this amounts to a mean WTP of £44.76 per individual visitor. This value is close to the WTO value elicited in the visitor survey (£13.75). This gives us confidence in the robustness of the payment ladder elicitation mechanism and hypothetical scenario.

This is a realistic WTP value, which aligns with the previous contingent valuation study at Stonehenge, which found that 35% of households were willing to pay an extra £18.50 over the next two years to construct the proposed tunnel, while 58% of households were willing to pay £7.40 for the next two years to construct the tunnel. We also note that this our initial estimate is based only on pilot data of n=42 respondents who answered the WTP question.

Of those who indicated that they would or would maybe be willing to pay, 7% (n=3) then went on to give a zero response.

Table 3 shows the range of values given by respondents. We see 20 WTP values of £5 or less, 10 values between £10-£25, and three values between £30 and £50 and two values of £125. There were no values closer to the maximum WTP value. 82% (n=33) were certain or very certain in their stated WTP value.

These findings lead us to conclude that the WTP payment ladder range is set realistically for the visitor population.

² WTP values coded as mid-point intervals for calculation of mean WTP.

Table 3 WTP Annual Tax – Value range

WTP	N.	%
0	3	7.14
£0.20	1	2.38
£1	4	9.52
£1.50	1	2.38
£2	5	11.90
£3	2	4.76
£4	2	4.76
£5	5	11.90
£10	8	19.05
£12	1	2.38
£20	1	2.38
£25	4	9.52
£30	2	4.76
£50	1	2.38
£125	2	4.76
Total	42	100.00

When we recode No responses as £0 WTP values (total 27% zero response), we find that the mean WTP an annual tax to support the tunnel scheme is £12.26. Note that this is the final approach that will be used to estimate mean WTP in the full dataset.

These values indicate that the payment ladder value range are set accurately, with the potential for some additional lower level figures.

Familiarity and opinion questions

We found that on 25% of respondents (n=14) were familiar or very familiar with the information about Stonehenge. In contrast, 56% (n=32) were very or extremely familiar with the information about the current A303 road.

- Only 42% (n=24) felt that the A303 has a negative or slightly negative effect on the **setting of Stonehenge in the wider landscape** (in contrast to 70% in the visitor survey).

- 47% (n=27) felt that the A303 has a negative or slightly negative effect on the **quality of the experience of Stonehenge and the surrounding WHS** (in contrast to 75% in the visitor survey).
- 21% (n=12) felt that the A303 has a negative or slightly negative effect on the **view of Stonehenge from the road**.
- 50% (n=28) felt the A303 had a beneficial or slightly beneficial effect on the **view of Stonehenge from the road** (in contrast to 26% in the visitor survey).

77% (n=44) found the information about the two road scenarios easy or very easy to understand.

In terms of the benefits associated with the different road options:

- 67% (n=26) found the **reduction of traffic noise/ tranquility** of Stonehenge and the World Heritage Site fairly or very important
- 51% (n=20) found **having no traffic visible from the stone circle** at the Stonehenge World Heritage Site fairly or very important
- 64% (n=25) found the **ability to explore the whole Stonehenge World Heritage site** and explore all its archaeological monuments without the land being divided by the road fairly or very important
- 59% (n=23) found the **removal of a modern road from a historic landscape** fairly or very important

Table 4 shows the reasons people gave for being willing to pay an increase in taxes. Only two people responded that they stated a WTP because they did not believe they would have to pay.

WTP for tunnel route - Reasons to pay	N.	%
A dual carriage-way would relieve traffic congestion and reduce accidents	8	22.22
A new road would benefit local community	2	5.56
I do not believe I would really have to pay	2	5.56
I support the removal of the A303 from a historic landscape	3	8.33
People should have the opportunity to visit the whole of the Stonehenge World Heritage Site and explore all its archaeological monuments without the land severance caused by the road	10	27.78
Stonehenge is a national icon that should be protected	9	25
The road spoils the tranquility of the Stonehenge World Heritage Site	2	5.56
Total	36	100

Willingness to accept range

We asked how realistic respondents found the willingness to accept compensation question. Of those who answered this question (n=5) 80% indicated that they didn't find the scenario realistic, while n=1 indicated that they did not know.

This question was asked to those who said they would not be willing to pay to support the tunnel scheme, or gave a £0 response when asked. In the pilot data, 5 respondents indicated that the removal of the road would reduce their life satisfaction.

Table 5 - Removal of A303 would reduce life satisfaction

Removal of the A303 on Life Satisfaction	
Decrease	5
Increase	2
No significant effect	11
Total	18

Those five individuals either gave WTA value of zero (n=3), or £200 (n=2) the highest value available in the payment card.

Table 6 WTA Range

	N.	%
0	3	60.00
200	2	40.00
Total	5	100.00

Alongside the visitor survey pilot, these findings suggest that:

- A) Respondents are having some trouble with their understanding of the WTA compensation question.
- B) The fact that individuals are consistently selecting the lowest or highest compensation amount adds further evidence of a lack of understanding or lack of realism in the WTA question.

This is despite adding the note that “whatever compensation amount you receive will mean that that money cannot be used on other public services”, as recommended following the previous visitor survey pilot.

However, we note that this finding is based on a very small sample of n=5.

There is also the risk that we might be witnessing compensation WTA bias, whereby respondents always choose the higher figure. This may be accentuated by hypothetical bias generated by the ambiguity in the compensation question.

There is a further risk in providing a wider payment range for the WTA question, that, having seen the previous payment ladder (those who answered Yes/Maybe, but then £0 response) could potentially influence stated WTA, priming respondents to think that they have should select a higher amount.

We note that the compensation value in the WTA question is a one off (lifetime) compensation amount for the loss of the road. In the final analysis, we would aggregate WTA values across the remaining lifetime of the respondent.

Also note that when we recode No responses (n=11) as zero for the WTA compensation value we obtain a mean WTA of £25.01.

C.3 Stonehenge General Population Pilot Debrief questions 21st September 2016

We performed a pilot survey of the online general population survey using a nationally representative panel of n=46. The pilot general population survey was performed over 20th-21st September 2016. The pilot was performed under identical conditions to the full survey. We obtained 46 completed pilot surveys and debrief questions.

- In terms of **length**, 65% (n=39) found the survey length okay, while 7% (n=3) found the survey a little long or very long. Three respondents found the survey length to be very short
- In terms of **difficulty**, 52% (n=42) found the survey either okay or easy. 9% (n=4) found the survey hard or very hard.
- 76% of respondents (n=35) indicates that they had **enough information** on the purpose and aims of the survey. 22% (n=10) would have liked more information, and one individual would have liked less information.
- 80% of respondents (n=37) found the **photos and map images** of Stonehenge and the alternative road schemes helpful for answering this survey.

We asked specific questions about the valuation section.

For the WTP question, 35% (n=16) found the scenario of an increase in annual taxes to support the alternative road scheme realistic. 37% (n=17) found the taxation scenario unrealistic, while 28% (n=13) did not know.

In terms of **sensitivity**, 3 respondents indicated that they found some of the questions personal or sensitive.

Table 1 shows that **83% of respondents felt they had enough information about the Stonehenge World Heritage Site.** **80% of respondents felt that they had enough information about the existing route of the A303.** **85% of respondents felt that they had enough information about the impacts associated with the existing route of the A303.** 26% indicated that they would have liked more information on the 2.9km tunnel scheme and 28% reported that they would have liked more information on the impacts associated with the 2.9km tunnel scheme.

Table 1 – Respondents provided with sufficient information on different aspects of the survey

	Yes – I had <u>ENOUGH</u> information	I would have liked <u>MORE</u> information	I would have liked <u>LESS</u> information
The Stonehenge World Heritage Site	38	8	0
The existing route of the A303	37	9	0
The impacts associated with the existing route of the A303	39	6	1
The 2.9km tunnel scheme	34	12	0
The impacts associated with the 2.9km tunnel scheme	33	13	0

Willingness to pay range

We asked if the range of payment amounts shown in the WTP payment ladder was adequate, in terms of the number of values shown and the range of values. **67% (n=31) indicated that the payment range was adequate.** 20% (n=9) indicated that they would have liked a wider range of values. 4% n=2 indicated that they would have liked more values of a lower amount, while 9% (n=4) indicated that they would have liked more values of a higher amount.

We asked individuals if their stated annual WTP taxation value was for themselves (as an individual) or their whole household. This question was also asked in the WTP range-testing question. Of those who answered the WTP question (n=28), 46% (n=13) indicated that the WTP was for themselves as an individual, while 32% (n=9) indicated that their WTP was for their household. Six respondents indicated that they did not know or were not sure. These pilot findings lead us to conclude that the WTP taxation question can be interpreted as either an individual or a household value, with the majority of respondents stating an individual-level WTP value.

In the pilot survey data 60% (n=28) indicated that they would or would maybe be willing to pay an increase in annual taxes over the three year construction period to support the tunnel scheme (Table 2).

Table 2 WTP Annual Tax – Yes/Maybe/No

	N.	%
Yes	8	17.39
Maybe	20	43.48
No	18	39.13
Total	46	100.00

We tested the range provided in the payment ladder though the pilot survey.

The raw mean WTP an increase in annual taxes for the alternative (tunnel) road scheme across n=28 respondents was £11.03³. Aggregated over the course of the construction period this amounts to a mean WTP of £33.09 per individual visitor. This value is close to the WTP value elicited in the visitor survey (£13.75). This gives us confidence in the robustness of the payment ladder elicitation mechanism and hypothetical scenario.

This is a realistic WTP value, which aligns with the previous contingent valuation study at Stonehenge, which found that 35% of households were willing to pay an extra £18.50 over the next two years to construct the proposed tunnel, while 58% of households were willing to pay £7.40 for the next two years to construct the tunnel. We also note that this our initial estimate is based only on pilot data of n=42 respondents who answered the WTP question.

Of those who indicated that they would or would maybe be willing to pay, 4% (n=2) then went on to give a zero response.

Table 3 shows the range of values given by respondents. We see 9 WTP values of £5 or less, 14 values between £10-£25, and three values between £30 and £35 with no higher values. 62% (n=16) were certain or very certain in their stated WTP value.

These findings lead us to conclude that the WTP payment ladder range is set realistically for the general population (who we would expect to have a lower WTP than the user (visitor and road) samples).

³ WTP values coded as mid-point intervals for calculation of mean WTP.

Table 3 WTP Annual Tax – Value range

	N.	%
£0	2	7.14
£1	3	10.71
£3	3	10.71
£5	3	10.71
£10	9	32.14
£12	1	3.57
£18	1	3.57
£20	1	3.57
£22	1	3.57
£25	1	3.57
£30	2	7.14
£35	1	3.57
Total	28	100.00

When we recode No responses as £0 WTP values (total 39% zero response), we find that the mean WTP an annual tax to support the tunnel scheme is £7.19. Note that this is the final approach that will be used to estimate mean WTP in the full dataset.

These values indicate that the payment ladder value range are set accurately.

Familiarity and opinion questions

We found that on 17% of respondents (n=8) were familiar or very familiar with the information about Stonehenge. In contrast, 33% (n=15) were very or extremely familiar with the information about the current A303 road. This is lower than the user survey population, which is as we would expect.

- Only 33% (n=15) felt that the A303 has a negative or slightly negative effect on the **setting of Stonehenge in the wider landscape** (in contrast to 70% in the visitor survey).
- 30% (n=14) felt that the A303 has a negative or slightly negative effect on the **quality of the experience of Stonehenge and the surrounding WHS** (in contrast to 75% in the visitor survey).
- Only 4% (n=2) felt that the A303 has a negative or slightly negative effect on the **view of Stonehenge from the road**.
- In contrast, 54% (n=25) felt the A303 had a beneficial or slightly beneficial effect on the **view of Stonehenge from the road** (in contrast to 26% in the visitor survey).

74% (n=34) found the information about the two road scenarios easy or very easy to understand.

In terms of the benefits associated with the different road options:

- 54% (n=14) found the **reduction of traffic noise/ tranquility** of Stonehenge and the World Heritage Site fairly or very important
- 65% (n=17) found **having no traffic visible from the stone circle** at the Stonehenge World Heritage Site fairly or very important
- 62% (n=16) found the **ability to explore the whole Stonehenge World Heritage site** and explore all its archaeological monuments without the land being divided by the road fairly or very important
- 54% (n=14) found the **removal of a modern road from a historic landscape** fairly or very important

Table 4 shows the reasons people gave for being willing to pay an increase in taxes. No respondents reported that they stated a WTP because they did not believe they would have to pay.

WTP for tunnel route - Reasons to pay	N.	%
A dual carriage-way would relieve traffic congestion and reduce accidents	3	13
A new road would benefit local community	1	4
I do not believe I would really have to pay	0	0
I support the removal of the A303 from a historic landscape	2	9
People should have the opportunity to visit the whole of the Stonehenge World Heritage Site and explore all its archaeological monuments without the land severance caused by the road	6	26
Stonehenge is a national icon that should be protected	8	35
The road spoils the tranquility of the Stonehenge World Heritage Site	1	4
Total	23	100

Willingness to accept range

We asked how realistic respondents found the willingness to accept compensation question. Of the two individuals who answered this question, one reported that they did and one that they didn't find the scenario realistic, while n=1 indicated that they did not know.

This question was asked to those who said they would not be willing to pay to support the tunnel scheme, or gave a £0 response when asked. In the pilot data, only 2 of the 20 respondents indicated that the removal of the road would reduce their life satisfaction.

Table 5 Removal of A303 would reduce life satisfaction

Removal of the A303 on Life Satisfaction	
Decrease	2
Increase	1
No significant effect	17
Total	20

Those two individuals either gave WTA value of zero (n=1), or £9 (n=1).

When we recode No responses (n=17) as zero for the WTA compensation value we obtain a mean WTA of £0.51.

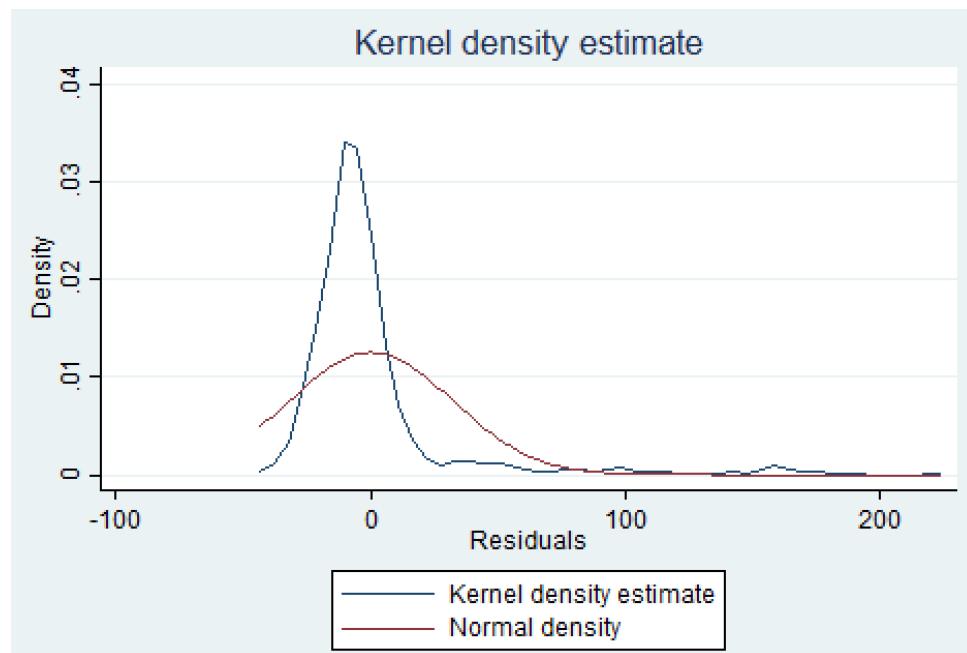
Appendix D Validity Testing

Results of the VIF (Variance Inflation Factor) Tests

VIF values above 4 would generate concerns around multicollinearity.

Variable	VIF
General population	3.01
Retired	2.92
Road users	2.75
In employment (full time, part time, self-employed)	2.72
Log age	2.32
Student	1.59
Log income	1.46
Children	1.41
Married/with partner	1.29
Familiar with the impact of A303	1.26
Number of times visited Stonehenge	1.25
Member	1.23
Health	1.19
Drivers license	1.17
Likely	1.17
University education	1.11
Ethnicity	1.1
Female	1.09
Certainty	1.03
Mean VIF	1.64

Kernel Density Estimates



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