Table of contents

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Executive summary</td>
</tr>
<tr>
<td>2</td>
<td>Introduction</td>
</tr>
<tr>
<td>3</td>
<td>Outline description of the proposed development</td>
</tr>
<tr>
<td>4</td>
<td>Summary of the conditions present on the site and its environs</td>
</tr>
<tr>
<td>5</td>
<td>Statement of Outstanding Universal Value</td>
</tr>
<tr>
<td>6</td>
<td>Assessment of Scheme alternatives</td>
</tr>
<tr>
<td>7</td>
<td>Consultation</td>
</tr>
<tr>
<td>8</td>
<td>Potential Scheme impacts on the WHS and its OUV</td>
</tr>
<tr>
<td>9</td>
<td>Outline methodology and terms of reference for the HIA</td>
</tr>
<tr>
<td>10</td>
<td>Likely sensitive receptors related to attributes of OUV</td>
</tr>
<tr>
<td>11</td>
<td>Design, mitigation and enhancement measures</td>
</tr>
<tr>
<td>12</td>
<td>Assessment of cumulative effects</td>
</tr>
<tr>
<td>13</td>
<td>References</td>
</tr>
<tr>
<td></td>
<td>Abbreviations</td>
</tr>
<tr>
<td></td>
<td>Glossary</td>
</tr>
<tr>
<td></td>
<td>Appendix A – Retrospective Statement of Outstanding Universal Value (SoOUV), 2013</td>
</tr>
<tr>
<td></td>
<td>Appendix B – A303 Amesbury to Berwick Down Heritage Monitoring and Advisory Group (HMAG) and the Scientific Committee Terms of Reference</td>
</tr>
</tbody>
</table>
1 Executive summary

1.1.1 This Heritage Impact Assessment Scoping Report sets out the scope of the Heritage Impact Assessment (HIA) for the Stonehenge, Avebury and Associated Sites World Heritage Site (WHS No. C373) located in Wiltshire, England, UK in relation to the proposed A303 Amesbury to Berwick Down road improvement project (‘the Proposed Scheme’). The Stonehenge element of the World Heritage property is located within the parishes of Durrington, Shrewton, Amesbury, Winterbourne Stoke and Wilsford cum Lake. The property was inscribed on the World Heritage List in 1986, on the nomination of the UK Government. This HIA Scoping Report follows the guidelines recommended by ICOMOS (Advisory Body to the World Heritage Committee), in particular the 2011 ICOMOS Guidance on Heritage Impact Assessments for Cultural World Heritage Properties [1].

1.1.2 In 2014, the UK Government Department for Transport (DfT) announced its intention to improve the A303 trunk road through the Stonehenge part of the WHS. The development of the Proposed Scheme has benefited from two UNESCO/ICOMOS Advisory Missions invited by the state party, in October 2015 and January 2017, and from a public consultation exercise held in February and March 2017.

1.1.3 A preferred route for the Proposed Scheme was announced on 11 September 2017. The World Heritage Centre was notified by the state party concurrently with the preferred route announcement and an invitation extended for a third joint UNESCO/ICOMOS Advisory Mission to review the preferred route proposals in early 2018, in advance of public consultation.

1.1.4 A formal HIA will be undertaken for the A303 Stonehenge Scheme in accordance with the ICOMOS Guidelines [1]. HIA is undertaken for cultural World Heritage properties to evaluate effectively the impact of potential development upon the Outstanding Universal Value (OUV) of World Heritage properties. HIA has been undertaken during the development of the Proposed Scheme to inform the road improvement proposals as an integral part of the iterative design process [1]. This allows the Proposed Scheme to respond to and accommodate further developments in archaeological understanding, and produce a final Scheme which ensures the protection of the Outstanding Universal Value of the World Heritage property.

1.1.5 A separate statutory Environmental Impact Assessment (EIA) is also being prepared for the Scheme, in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 [2], and guidance set out in the Highways England’s Design Manual for Roads and Bridges (DMRB), Volume 11, Environmental Assessment [3].

1.1.6 A separate Heritage Impact Assessment (HIA) is being prepared in parallel with the EIA. HIA is recommended by ICOMOS for development which affects cultural World Heritage properties, in order to evaluate effectively the potential impact of development upon the OUV, integrity and authenticity of the WHS, and to inform the proposed scheme design and mitigation. The HIA will focus on the impact of the proposed scheme on the OUV of the Stonehenge part of the WHS and the attributes that convey the OUV. The HIA will be reported and summarised in the
ES and the full HIA Report will be published as a standalone technical appendix to the ES. The EIA will consider impacts on the WHS, informed by the HIA, and will assess the significance of individual or, where appropriate, groups of designated and non-designated heritage assets. The preparation of both EIA and HIA will be coordinated closely, and both reports will draw upon the same historic environment baseline.

1.1.7 This HIA Scoping report considers the Statement of Outstanding Universal Value, Integrity and Authenticity adopted by the World Heritage Committee in June 2013, and the attributes set out in the WHS Management Plan that express or convey that OUV. The Proposed Scheme is described in outline and the present conditions at the World Heritage Site are summarised. The scoping report details the historical background of the Proposed Scheme and sets out how alternatives are being considered. The proposed methodology for the HIA is set out, based on ICOMOS Guidance [1]. Information on the baseline data collection, study areas and the proposed survey and assessment methodology is also provided. Information on consultation and stakeholder engagement is presented together with an outline programme for consultation and reporting.

2 Introduction

2.1 Purpose of the scoping report

2.1.1 Major highways schemes in England pass through a series of design and assessment stages, including statutory EIA, prior to a Development Consent Order (DCO) Application under the terms of the Planning Act 2008 [4]. These processes include full and detailed consideration of the historic environment, including World Heritage properties. In addition to these statutory provisions, a formal HIA will be undertaken for the A303 Stonehenge Scheme.

2.1.2 Heritage Impact Assessment (HIA) is undertaken for World Heritage properties to evaluate effectively the impact of potential development upon the OUV of properties, to evaluate the potential impacts of the Proposed Scheme upon integrity and authenticity and to inform Scheme design and mitigation.

2.1.3 This HIA Scoping Report relates to the HIA that will be undertaken for the Scheme as part of the detailed design process. The HIA will be undertaken alongside the statutory EIA process. The HIA will focus on the impact of the Proposed Scheme on the OUV of the Stonehenge part of the WHS and the attributes that convey the OUV. In contrast, the EIA will consider impacts on the significance of designated and non-designated heritage assets. The HIA will be summarised and integrated into the Environmental Statement (ES) and the full HIA Report will be published as a standalone technical appendix to the ES. The preparation of both EIA and HIA is being coordinated closely and should be read in parallel, and both reports will draw upon a single historic environment baseline and Project GIS.

2.2 Stakeholders

2.2.1 Stakeholders for this HIA Scoping Report comprise the A303 Heritage Monitoring and Advisory Group (HMAG) and the Scientific Committee. Their Terms of Reference are contained in Appendix B of this HIA Scoping Report.

2.2.2 Highways England is a UK Government-owned company established in 2013 to operate, maintain and improve the strategic road network in England. The A303 Stonehenge Scheme is promoted by Highways England as part of its road investment strategy funded by the UK Government.

2.2.3 The Heritage Monitoring Advisory Group (HMAG) comprises a small number of historic environment professionals who have an ongoing statutory or formal advisory role in the WHS. HMAG was set up partially in response to an UNESCO/ICOMOS recommendation from its 2015 Advisory Mission on the A303 Stonehenge project. The Group comprises Historic England, Wiltshire Council (Archaeology Service), English Heritage and the National Trust and is tasked with providing independent heritage advice on the project, which it has done over the past 18 months. HMAG’s role ranges from, setting out and monitoring archaeological requirements and standards of work within the WHS, to advising on the heritage impact assessments undertaken to inform route choice and mitigation measures for inclusion in the project proposals to be taken forward for planning consent and construction. The group has a Terms of Reference agreed between the organisations represented on HMAG and Highways England (see Appendix B).

2.2.4 The Scientific Committee has also been set up in response to UNESCO/ICOMOS recommendations from both its 2015 and 2017 advisory missions on the project. Highways England has assisted HMAG to set up the Scientific Committee. Its membership comprises recognised, leading, independent experts who can provide additional advice and make a positive contribution to the development of the project. The members are all subject matter or period specialists with a specific skill set or depth of experience in aspects of the historic environment of the WHS. The Committee is chaired by Sir Barry Cunliffe and works to Terms of Reference agreed by HMAG that enable it to fulfil the role described by UNESCO/ICOMOS in their 2017 recommendation (see Appendix B). The Committee will support HMAG in overseeing the project from the announcement of the Preferred Route onwards, throughout its continuing development and future construction.

2.2.5 Further information on HIA stakeholders and the consultation process is contained in Section 7, Consultation.

3 Outline description of the proposed development

3.1 Background to the A303 Stonehenge Scheme

3.1.1 The A303 between Amesbury and Berwick Down currently passes directly through the Stonehenge element of the Stonehenge, Avebury and Associated Sites World Heritage Site. The Stonehenge landscape is extensive, at around 25 km², which captures the relationship between the monuments as well as their landscape setting. Altogether, the Stonehenge part of the WHS includes more
The current A303 passes within 165m of the Stonehenge Monument - a globally recognisable icon of Britain which attracts 1.4 million visitors each year. The A303 separates the iconic Stones from other prehistoric monuments and severely limits enjoyment of the wider site. The A303 currently has a major negative impact on the setting of Stonehenge, the integrity of the WHS and visitor access to some parts of the wider landscape. The harmful impacts of roads and traffic on the WHS include visual intrusion, noise and air pollution within the WHS.

3.1.2 The issue of traffic congestion around the Stonehenge part of the World Heritage property has been the subject of discussion at the UNESCO World Heritage Committee since 2004.

3.1.3 The UK Government has considered a number of options to rectify this situation, from an initial proposal in the 1989 Roads for Prosperity programme, the reintroduction of an A303 improvement scheme in the 1998 roads programme, and the A303 Stonehenge Improvement Scheme, a 2.1km bored tunnel within the World Heritage property, announced in 2002. Although the last of these was recommended for implementation in 2005 following a public inquiry, in 2007 the UK Government opted not to proceed with the project.

3.1.4 In 2005, the World Heritage Committee regretted that no progress had been made in the implementation of the A303 Stonehenge Improvement Scheme [6] [WHC Decision 29 COM 7B.88]. In 2007, it urged the State Party ‘to find an appropriate solution compatible with the outstanding universal value of the property [7]’.

3.1.5 The Summary of the 2006 Periodic Reporting (Cycle 1) noted that ‘The Stonehenge Project seeks to restore the integrity of the site by removing the roads and moving current visitor facilities’. The conclusions highlighted the impact of traffic and roads cutting through monuments and the landscape, and noted that it was difficult to access key prehistoric monuments because of the A303 barrier. The report noted a proposed tunnel for the A303 [8].

3.1.6 The 2013 SoOUV states that:

The presence of busy main roads going through the World Heritage property impacts adversely on its integrity. The roads sever the relationship between Stonehenge and its surrounding monuments, notably the A344 which separates the Stone Circle from the Avenue [9].

3.1.7 Although in 2013, the A344 was removed and a new Stonehenge visitor centre opened c.1.5km west of the Stonehenge monument, the A303 continues to adversely affect the OUV and integrity of the Site. The 2015 ICOMOS/WHC Advisory Mission noted that:

This development has clearly brought much benefit to the World Heritage site in terms of visitor experience, recovery and enhancement of OUV. The A344 case illustrates well the benefit that the removal (tunnel) of the A303 could bring to the World Heritage site as a whole [7].

3.1.8 The SoOUV section on protection and management requirements notes that:
Although substantial progress has been made, the impact of roads and traffic remains a major challenge in both parts of the World Heritage property. The A303 continues to have a negative impact on the setting of Stonehenge, the integrity of the property and visitor access to some parts of the wider landscape [5, p. 10].

3.1.9 Further details regarding the impact of the current A303 road on the World Heritage property are described in Section 4.1, Impact of existing A303.

3.2 The A303 Stonehenge Scheme

3.2.1 An A303 Feasibility Study was announced as part of the UK Government’s Autumn Statement in 2013. The intention to dual the A303 from Amesbury to Berwick Down, with a twin-bored tunnel of at least 2.9km within the WHS was announced by the Government on 1 December 2014.

3.2.2 The A303/A30/A358 package, which is part of the UK Government’s Road Investment Strategy (RIS), was identified in the 2014 National Infrastructure Plan as a priority project and is listed in the top forty priority infrastructure projects [10]. The RIS (2015-2020) states that construction will start within the current roads period (i.e. by the end of March 2020), subject to the necessary approvals [11].

3.2.3 The Scheme forms a fundamental part of the Wiltshire Local Transport Plan 2011-2026 [12].

3.2.4 Further details regarding the development of this Scheme are set out in Section 6, Assessment of Scheme Alternatives.

3.3 Project description

3.3.1 The A303 is a trunk road in southern England, connecting the M3 and the A30, it is one of the main routes from London to South West England, and on the most direct strategic route from the South East to the South West for business and tourists. However, the existing A303 has a number of traffic bottle-necks limiting accessibility to the South West with consequential impact on the region’s economy and growth. Traffic problems on this section of the corridor are particularly acute.

**Scheme design objectives**

3.3.2 The A303 will pass through a bored tunnel, of at least 2.9km in length, to reduce its impact on the WHS. The improvement will also include a bypass of the village of Winterbourne Stoke beyond the WHS to the west.

3.3.3 The four principal objectives for the Scheme, termed the Client Scheme Requirements (CSRs), are:

- **Transport**: To create a high quality route that resolves current and predicted traffic problems and contributes towards the creation of an Expressway between London and the South West.
• Economic growth: In combination with other schemes on the route, to enable growth in jobs and housing by providing a free flowing and reliable connection between the East and the South West peninsula.

• Cultural heritage: To contribute to the conservation and enhancement of the WHS by improving access both within and to the site.

• Environment and community: To contribute to the enhancement of the historic landscape within the WHS, to improve biodiversity along the route and to provide a positive legacy to communities adjoining the road.’ [13, p. 162]

3.3.4 The Heritage CSRs were expanded in the 2017 Technical Appraisal Report, as follows:

a) ‘The existing road will be downgraded as it passes through the WHS for use by non-motorised users and for access.

b) The strategic route will be redirected so as to reduce its site and sound impacts on the WHS. The redirected route will treat archaeological features with sensitivity and will protect the Outstanding Universal Value (OUV) of the WHS. It will seek to minimise any damage to or loss of archaeology.

c) Grade separated junctions will be introduced in place of at-grade junctions on the A303 within the length of the scheme, improving access onto and off the A303, with well-designed signing to access the WHS.

d) Where the road passes through the WHS it will have an iconic identity and be of good design. As far as is practicable and without compromise to safety, the design will seek to accommodate the specific needs of the WHS.

e) Learning associated with any excavation within the WHS will be ensured, by working sensitively and in close collaboration with key heritage stakeholders’ [13, p. 31].

Proposed Scheme components

3.3.5 The preferred route for the Proposed Scheme was confirmed by the Secretary of State in September 2017. It commences 5km west of the WHS boundary at Yarnbury Castle, near Berwick Down, and follows a general west-east alignment similar to the existing A303, but passing to the north of Winterbourne Stoke, for some 12.6km to finish just east of Solstice Park, Amesbury.

3.3.6 The Proposed Scheme consists of the following principal elements:

a) Winterbourne Stoke Bypass: A new western section of dual two lane carriageway highway, providing a bypass to the north of Winterbourne Stoke with a viaduct over the River Till Valley;

b) Long Barrow Junction: A new grade separated junction to the west of the existing junction and 600m outside the WHS, accommodating free-flowing A303 and A360 traffic movements as well as a link to Winterbourne Stoke along the de-trunked section of the existing A303;
c) **Tunnel and Approaches:** A new section of dual two lane carriageway highway in a steep sided cutting at least 6.5m deep leading into a twin-bore tunnel, of at least 2.9km in length, emerging east of the Avenue and north of the existing A303;

d) **Countess Junction:** A new grade separated junction between the A303 and A345 accommodating free-flowing traffic movements, north of Amesbury. This junction will comprise a fly-over of the existing Countess Roundabout;

e) **The existing A303:** This will be removed within the WHS and replaced with a green byway (along with short sections of the A360 on the western boundary of the WHS). To the west of the WHS, the A303 will be de-trunked and retained for local access to Winterbourne Stoke;

f) **Right of way and byway open to all traffic (BOAT):** There is an existing right of way for all traffic between Byways 11 and 12 provided by the existing A303. Options are being explored as to how to maintain this connection, and where to position it in the landscape as part of the Scheme; and

g) **High Load Route and Diversionary Route:** a High Load Route is required for overheight vehicles which will be prohibited from the tunnel and a diversionary route is required for the event of both bores of the tunnel being closed. Both routes would leave the A303 at the new Longbarrow Junction, run to the north of the A303, along the Packway (the northern boundary of the WHS) before re-joining the A303 at Countess Roundabout (for the diversionary route) and the Solstice Park junction (for the High Load Route).

3.3.7 As part of the Proposed Scheme, the following elements will also be required:

a) Temporary traffic management areas, temporary working and storage areas, material stockpiles, construction compounds, haul roads, and provision for site compounds to be used during the construction period; and

b) Enabling works including utility diversions as required.

3.3.8 Between September 2017 and January 2018, additional work has been undertaken to refine the outline design for the Scheme. This includes a number of additional green bridges crossing the main road alignment, beyond the boundaries of the World Heritage Property. This work is presented in the Preliminary Environmental Information Report.

**Winterbourne Stoke Bypass**

3.3.9 The Proposed Scheme commences on the existing A303 immediately south east of Yarnbury Castle and closely follows the existing A303 alignment for 1km. It then continues in a north easterly direction providing a bypass to the village of Winterbourne Stoke. Local access continuity from Winterbourne Stoke to the north is maintained by provision of a single span bridge over the existing B3083.

3.3.10 The Proposed Scheme continues in an easterly direction crossing the River Till valley on a viaduct structure. This structure also provides at-grade crossing points for the bridleway located on the west side of the River Till valley allowing the existing public access routes to be maintained.
Long Barrow Junction

3.3.11 The Proposed Scheme continues in an easterly direction, following the existing topography, crossing the line of the existing A303. A new ‘green bridge’ is proposed to carry an existing byway on Winterbourne Stoke Down over the A303. A new grade separated dumb-bell shaped junction is proposed immediately east of this crossing point and to the west of the WHS boundary. This new junction would accommodate free-flowing A303 and A360 traffic movements, with the A360 crossing over the A303 at a level which reflects the general adjacent ground profile. The existing A360 would be realigned to tie in with this new junction, positioned to the west of the WHS. A link to the de-trunked A303 to the west accessing Winterbourne Stoke is also provided from the Long Barrow Junction. The existing detrunked parts of the A360 will be converted to a green byway.

Tunnel and Approaches

3.3.12 The route then enters the WHS and is situated just south of, and closely paralleling the line of the existing A303, to minimise impact on and avoid many important archaeological sites, including the newly-discovered barrows located to the east of the A360. A new ‘green bridge’ is proposed to carry the proposed green byway (formerly the A360) over the A303. The Proposed Scheme alignment, in this first 1km section within the WHS, is placed in a steep sided retained cutting.

3.3.13 The Proposed Scheme then continues in an easterly direction following an alignment parallel with the existing A303 offset some 50 metres to the south. For the majority of the section within the WHS the Proposed Scheme is within a twin-bore tunnel that is of at least 2.9km in length. A closed-face Tunnel Boring Machine, of approximately 13m diameter, is anticipated for the construction of the proposed tunnel. This will accommodate two lanes of traffic within each tunnel bore. The tunnel Emergency Evacuation Strategy requires the two bores to be connected underground by a series of Cross-Passages at regular intervals to allow for the safe evacuation of road users in the event of an incident.

3.3.14 The western tunnel portal is located approximately 1km from the western limit of the WHS, north west of Normanton Gorse, and the eastern tunnel portal is located to the east of the King Barrow Ridge and the archaeological feature known as ‘The Avenue’.

3.3.15 The tunnel will contain appropriate Mechanical and Electrical (M&E) systems and safety systems, and the plant for these will be housed within the tunnel and in services buildings at each of the tunnel portals. The services buildings will be incorporated sympathetically into the approach structures either side of the tunnel to minimise their visual impact. A control room will be provided at Countess Roundabout, again with an architectural treatment that is sympathetic to the setting.

3.3.16 Details are yet to be agreed with the various stakeholders, but it is anticipated that the existing A303 between Longbarrow Junction and the eastern tunnel portal would be converted to a “greenway” open to Non-Motorised Users (NMUs) only. Agricultural and statutory utility access would need to be maintained, but
Vehicular access for this could be gate controlled. The exact location of the Byway Open to All Traffic (BOAT) between Byways 11 and 12 has yet to be confirmed. The physical, visual and setting impacts of any proposed BOAT to link the two byways, put forward as part of the Scheme, will be assessed as part of the HIA.

Countess Junction

3.3.17 The route continues from the eastern tunnel portal utilising the existing A303 dual carriageway to the existing Countess Junction, located immediately to the north of Amesbury. This existing at-grade junction would be improved, within the existing highway boundary, to provide a grade separated junction accommodating free-flowing A303 and A345 traffic movements. The proposed junction would carry traffic going east-west along the A303 over the traffic going north-south along the A345 Countess Road. The Proposed Scheme would then continue east to tie in with the existing A303 close to the existing River Avon Bridge and to the west of Solstice Park Junction.

High Load Route

3.3.18 The existing A303 within the Proposed Scheme area is identified as a high load route option for vehicles with a maximum height of 6.1m. A restriction to only allow normal height vehicles (including typical buses, coaches and normal height HGVs) within the new twin-bored tunnel is being considered. To facilitate this, it is proposed that the high load route is diverted north of the existing A303. This would be an occasional-use route north along the A360 from Long Barrow Junction, then eastward along the Packway, through Larkhill and along the A3028 to Bulford before re-joining the A303 at the Solstice Park junction.

Diversionary Route

3.3.19 In the event of the emergency closure of both bores of the proposed tunnel, traffic would be diverted along the High Load Route as far as the A345, where it would travel south to re-join the A303 at Countess Roundabout.

Highway Cross Section

3.3.20 The proposed highway cross-section for the majority of the Proposed Scheme length is expected to be formed of two standard 3.65m wide lanes in each direction with a central reserve and a 1m hard strip provision. Outside the tunnel a minimum verge width of 2.5m would be provided in each direction, this would be increased as required to provide the appropriate visibility splays and accommodate any highway features such as vehicle restraint systems, communication equipment and lay-bys.

Ancillary infrastructure

3.3.21 At this stage a limited number of variable message signs have been included in the design for public consultation and Emergency Refuge Areas for use by road users in emergency situations. These have been located throughout the length of the Proposed Scheme, outside the WHS. More detail of the variable message signing, emergency refuge and other communication equipment will be available as the design progresses.
3.3.22 Street lighting is not currently included in the proposals anywhere along the route except inside the tunnels and the retention of the existing lighting provision at Countess Roundabout. It should be noted that the provision of lighting is subject to an appropriate safety assessment.

3.3.23 The proposed method of surface water disposal for the Proposed Scheme is infiltration. The suitability of this method would be confirmed following ongoing ground water monitoring and the detailed design of the proposed infiltration devices. Details of the proposed drainage arrangements and the provision of appropriate measures for treatment to mitigate pollution would be developed in parallel with discussions with the Environment Agency.

3.3.24 New structures required for the Proposed Scheme include a twin-bored tunnel under part of the WHS, a new viaduct over the River Till Special Area of Conservation (SAC), grade separated interchanges at the junctions with the A360 and A345 and a number of potential Public Right of Way (PRoW), accommodation road structures (bridges or underpasses) and other landscape connectivity features. Development of the form and detail of all these structures is ongoing.

Construction activities

3.3.25 The current proposals allow for temporary traffic management areas, temporary working and storage areas, material stockpiles, construction compounds, haul roads, and provision for site compounds to be used during the construction and post construction maintenance periods. These details are being developed in parallel with the design and further details will be presented for statutory consultation prior to their refinement and assessment.

3.3.26 It is anticipated that the Proposed Scheme would be constructed in two main phases:

a) Phase 1 would be the construction of the surface roads, bridges and junctions. The East and West sections would each have independent earthworks balance, i.e. the embankments would be constructed using material excavated from cuttings. No materials will be stockpiled within the WHS. There will be no new embankments within the WHS. At the end of Phase 1 traffic could then be diverted on to the Winterbourne Stoke Bypass, but would remain on the existing A303 from Long Barrow Junction to Countess Junction; and

b) Phase 2 would be to construct the tunnel and cross passages. It is likely that a Tunnel Boring Machine (TBM) would be used. This would be launched from the western end of the tunnel. The TBM would either be turned around to construct the second bore from east to west or disassembled and transported back to Long Barrow Junction to bore the second tunnel from west to east. Spoil arising from the tunnels would be extracted at the western tunnel portal and used for environmental mitigation and landscaping or habitat enhancements outside the WHS. Any excess spoil would be managed in accordance with a materials handling and spoil management strategy and any relevant waste management regulations. No tunnel spoil will be placed in the WHS, whether temporarily or permanently.
Timescales

3.3.27 Statutory Consultation for the Proposed Scheme is planned to take place in early 2018, and following assessment of the consultation feedback and appropriate design amendments and EIA, the formal DCO application is planned for late 2018. Subject to successfully passing through the DCO process it is intended to commence construction in 2021, with the year of opening anticipated to be 2026.

Design stages

3.3.28 This Heritage Impact Assessment Scoping Report is based on the emerging preliminary design for the Scheme. The Scheme is to be developed further to an outline design stage which will form the basis for the DCO application. Flexibility will be inbuilt to the outline design to provide scope for further ‘value engineering’ through innovative design and construction techniques. The outline design will continue to be informed by the EIA and HIA through the iterative working between designers and environmental specialists.
Figure 1 – Location of the Proposed Scheme
Figure 2 – Location of designated heritage assets
Figure 3 – Location of non-designated heritage assets
3.4 National and local planning context

3.4.1 The UK Government is signatory of the World Heritage Convention [14]. The UK Government protects World Heritage properties in England in two ways: firstly, individual buildings, monuments and landscapes are designated under the Planning (Listed Buildings and Conservation Areas) Act 1990 [15] and the 1979 Ancient Monuments and Archaeological Areas Act [16]; and secondly through the UK Spatial Planning system under the provisions of the Town and Country Planning Acts [17] [15] [18]. The individual sites and monuments within the World Heritage property are protected through the UK Government’s designation of individual buildings, monuments, gardens and landscapes at a national level.

3.4.2 The Scheme is defined as a Nationally Significant Infrastructure Project (NSIP) under Section 14(1)(h) and Section 22 of the Planning Act 2008 (PA 2008) (as amended by The Highway and Railway (Nationally Significant Infrastructure Project) Order 2013) [4] as it is the construction of a highway wholly in England and the area for the development is greater than 12.5 hectares. In accordance with the legislation a Development Consent Order (DCO) is therefore required to be applied to allow the construction and operation of the Scheme.

3.4.3 The Localism Act 2011 [19], appointed the Planning Inspectorate (the Inspectorate) as the agency responsible for operating the DCO process for NSIPs. In its role, the Inspectorate will examine the application for the proposed A303 Stonehenge DCO and then will make a recommendation to the Secretary of State who will make the decision on whether to grant or to refuse the A303 DCO.

3.4.4 In accordance with section 104(2) of the PA 2008 (as amended), the Secretary of State is required to have regard to the relevant national policy statement, amongst other matters, when deciding whether or not to grant a DCO. Other matters that the Secretary of State would consider important and relevant include national and local planning policy.

3.4.5 Government guidance on protecting the Historic Environment and World Heritage is set out in National Policy Statement for National Networks (NPSNN) [20], the National Planning Policy Framework (NPPF) [21] and Planning Practice Guidance (PPG) [22]. It is also set out in the Policies to protect, promote, conserve and enhance World Heritage properties, their settings and, where defined, their buffer zones are also found in statutory local planning documents.

3.4.6 A specific policy in the Wiltshire Core Strategy Development Plan Document (adopted January 2015) protects the Outstanding Universal Value of the property from inappropriate development:

The setting of the WHS beyond its designated boundary is also protected, as inappropriate development here can have an adverse impact on the WH property and its attributes of OUV. The setting is the surrounding in which the World Heritage Site is experienced. It includes a range of elements such as views and historical, landscape and cultural relationships. The setting of the World Heritage Site is not precisely defined and will vary depending on the

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1 World Heritage Sites are regarded as designated heritage assets of the highest significance in both the NPSNN [paragraph 5.131] and the NPPF [paragraph 132].
nature and visibility of the proposal. A future setting study\(^2\) will provide further information and a preferred methodology for the assessment of proposed development for its potential impact on the WHS and its attributes of OUV. Light pollution and skyglow which could adversely affect the site must be adequately addressed through the careful management of development [23].

4 Summary of the conditions present on the site and its environs

4.1 Impact of existing A303

4.1.1 A major step towards improving the protection and management of the property was taken with the opening of the new Stonehenge visitor centre, the closure of the A344 and the closure of the old visitor centre in 2013. However, the A303 remains a problem because it impacts upon the settings of many of the principal monuments, including Stonehenge itself, and the visual, physical, spatial, contextual and experiential relationships between monuments. These settings and relationships are attributes of the OUV of the WHS. The A303 also restricts and severs access and impacts the quality of visitor experience, such that the vast majority of visitors are able only to visit part of the WHS.

4.1.2 The 2013 SoOUV notes that:

Although substantial progress is being made, the impact of roads and traffic remains a major challenge in both parts of the World Heritage property. The A303 continues to have a negative impact on the setting of Stonehenge, the integrity of the property and visitor access to some parts of the wider landscape. A long-term solution remains to be found [9].

4.1.3 The 2015 Management Plan highlights the impact of the A303 as follows:

Roads and traffic in particular dominate in a number of areas and are visibly and aurally intrusive. At Stonehenge, although considerable progress has been made by the removal of the A344, the A303 (which follows the line of a former 18th-century toll road) and the A360 run straight across the landscape. The traffic impacts negatively on the setting of multiple attributes of OUV including Stonehenge, the round barrow cemeteries on King Barrow Ridge and Winterbourne Stoke Crossroads Barrows. In addition the A303 and the A345 sever the Stonehenge Avenue and the henge at Durrington Walls respectively in two [5, p. 21].

At Stonehenge the A303 trunk road is a highly visible route that cuts through the WHS landscape. The western boundary of the WHS is the A360 and part of the eastern boundary is formed by the A345 which also cuts through the henge at Durrington Walls. The northern boundary of the site is the Packway which is the main access route to the army base at Larkhill ... Significant volumes of traffic pass through the WHS on the A303 trunk road and also along the other main roads bounding the Site to the east and west. 2013 figures from the Department for Transport show daily traffic flows of over 26,700 vehicles. The settlements around the Site and down the Avon Valley generate traffic as does the very large distribution centre at Solstice Park to the east. Stonehenge itself

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\(^2\) This study has not yet been undertaken at the time of writing (November 2017).
generates traffic with over 1.25 million visitors to the Stones annually most of whom come by car or coach. In the future the Department for Transport predicts that the volume of both commuter and leisure-related traffic is likely to continue to grow in line with national trends, driven by changing social, demographic and economic factors… [5, pp. 158-59].

Although the closure of the A344 marks very substantial progress at Stonehenge, the A303 continues to have a major impact on the integrity of the wider WHS, the setting of its monuments and the ability of visitors to explore the southern part of the Site. The A303 divides the Stonehenge part of the WHS landscape into northern and southern sections diminishing its integrity and severing links between monuments in the two parts. It has significant impacts on the setting of Stonehenge and its Avenue as well as many other monuments that are attributes of OUV including a number of barrow cemeteries. The road and traffic represent visual and noise intrusion and have a major impact on the tranquillity of the WHS. Access to the southern part of the WHS is made both difficult and potentially dangerous by the road. In addition to its impacts on the WHS, reports indicate that the heavy congestion has a negative impact on the economy in the South West and locally and on the amenity of local residents [5, p. 169].

4.1.4 The 2015 Joint World Heritage Centre/ ICOMOS Advisory Mission report noted that:

The removal of the damaging surface A303 from the World Heritage site has been a long-running ambition of the UK Government, due to the serious harm the current road is causing to OUV, not only through the noise, pollution and distraction of heavy traffic, but also due to the effective severance of the bulk of the WH property to the south of the current A303 from the northern part of the property containing Stonehenge and the other major ceremonial sites and monuments [24, p. 5].

4.2 Management of the World Heritage property

4.2.1 One of the requirements of the UNESCO World Heritage Committee, as set out in the Operational Guidelines [25], is to have an appropriate management plan or other management system to ensure the effective protection of the site for present and future generations. The current WHS Management Plan was published in 2015. It is the third iteration of the management plan, though the first to be prepared for the entirety of the Stonehenge, Avebury and Associated Sites WHS. Previous plans covered the Stonehenge and Avebury elements separately.

4.2.2 The Management Plan states that:

The on-going and overarching priority of the Management Plan is to encourage the sustainable management of the WHS, balancing its needs with those of the farming community, nature conservation, access, landowners and the local community [5, p. 8].

The priorities of the 2015–2021 Management Plan are to:
§ Protect buried archaeology from ploughing and enhance the setting of sites and monuments by maintaining and extending permanent wildlife-rich grassland and managing woodland and scrub;

§ Protect monuments from damage from burrowing animals;

§ Reduce the dominance and negative impact of roads and traffic and ensure any improvements to the A303 support this;

§ Improve the interpretation and enhance the visitor experience of the wider landscape;

§ Ensure any development is consistent with the protection and where appropriate enhancement of the monuments and their settings and the wider WHS landscape and its setting;

§ Spread the economic benefits related to the WHS to the community and wider county;

§ Encourage local community engagement with the WHS;

§ Encourage sustainable archaeological research and education to improve and communicate the understanding of the WHS [5, p. 8].

4.3 Recent archaeological discoveries

4.3.1 Since the publication of the Management Plan in 2015 [5], further archaeological work has been carried out within the World Heritage property, including investigations by Historic England and assessment and evaluation for Highways England undertaken by Wessex Archaeology related to the Scheme development.

4.3.2 The HIA will consider the results of all archaeological investigations undertaken since the publication of the 2015 Management Plan. In particular, it will consider:

a) The published results of Historic England’s Stonehenge Southern WHS Survey project, which has included aerial mapping, geophysical survey, earthwork survey and excavations. Amongst other results, this project has excavated a newly discovered group of Neolithic pits on the southern extent of King Barrow Ridge at West Amesbury Farm [26];

b) The published results of ongoing research excavations at Blick Mead spring, in the north east of Vespasian’s Camp, where possible Mesolithic settlement activity on the floor of the River Avon is being studied [27];

c) The discovery/confirmation of the existence of two long barrows and a possible ‘hengiform’ monument in the area around the Diamond copse (‘the Diamond group’) in the course of field evaluation associated with the present Scheme; and

d) The results of ongoing surveys including geophysical survey within the WHS.

4.3.3 Archaeological evaluation works to support the EIA, HIA and DCO application are currently being progressed. All surveys are being designed with input from HMAG and the Scientific Committee to inform decision-making as the design process continues.
5 Statement of Outstanding Universal Value

5.1 Background development of Statement of Outstanding Universal Value

1985-6 World Heritage Site nomination

5.1.1 The World Heritage Site nomination document sent to UNESCO in 1985 [28] notes that:

Stonehenge and Avebury, in Wiltshire, are among the most famous groups of megaliths in the world. These two sanctuaries are formed of circles of menhirs arranged in a pattern whose astronomical significance is still unexplained. These holy places and various nearby Neolithic sites offer an incomparable testimony to prehistoric times.

The WHS was included on the World Heritage List in 1986.

5.1.2 The three original UNESCO definitions of Criteria i, ii and iii for inscription on the world heritage list, which were current and in use in 1985–6, are:

- **Criterion (i)** – represent a unique artistic achievement, a masterpiece of creative genius.

  The monuments of the Stonehenge, Avebury, and Associated Sites World Heritage Sites property demonstrate outstanding creative and technological achievements in prehistoric times.

- **Criterion (ii)** – have exerted great influence, over a span of time or within a cultural area of the world, on developments in architecture, monumental arts or town planning and landscaping.

  The World Heritage Site provides an outstanding illustration of the evolution of monument construction and of the continual use and shaping of the landscape over more than 2000 years, from the early Neolithic to the Bronze Age. The monuments and landscape have had an unwavering influence on architects, artists, historians, and archaeologists, and still retain a huge potential for future research.

- **Criterion (iii)** – bear a unique or at least exceptional testimony to a civilisation which has disappeared.

  The complexes of monuments at Stonehenge and Avebury provide an exceptional insight into the funerary and ceremonial practices in Britain in the Neolithic and Bronze Age. Together with their settings and associated sites, they form landscapes without parallel.

5.1.3 These criteria are further described in Section 5.2.

5.1.4 It is a serial WHS, meaning that it is split into two separate landscape areas: Stonehenge and Avebury. In the main, only the Stonehenge element of the WHS will be affected by the Scheme, and this part of the combined WHS will be the predominant focus for this HIA Scoping report, and the HIA. However, where the Scheme has the potential for temporary effects on the Avebury part of the WHS,
for instance following possible changes in visitor patterns during construction, these will also be assessed in the HIA.

**2008 Statement of Significance**

5.1.5 The first Statement of Significance for the Stonehenge, Avebury and Associated Sites WHS was developed by the Stonehenge and Avebury WHS Coordinators and the Steering Committee and was approved by the UNESCO World Heritage Committees in July 2008 [29]. It became part of the overall Statement of Outstanding Universal Value, updated to include assessments of integrity and authenticity, which was agreed by the World Heritage Committee in 2013.

**2009 Stonehenge World Heritage Site Management Plan**

5.1.6 The 2009 Stonehenge World Heritage Site Management Plan [30] defined seven attributes of Outstanding Universal Value, based on the Statement of Significance, along with assessments of integrity and authenticity. It highlighted that all Neolithic and Early Bronze Age funerary and ceremonial monuments and associated sites, their interrelationships and their relationships with the landscape are attributes of Outstanding Universal Value and need to be treated as such.

5.1.7 The 2009 Management Plan took a more holistic approach to the OUV of the property than the 1999 English Heritage/ National Trust Master Plan and the 2000 Management Plan, moving away from the focus on Stonehenge and the ‘Stonehenge Bowl’ by presenting a broader view of the property’s OUV. This recognizes the equal consideration that must be afforded to all attributes of OUV.

**2013 Adopted Statement of Outstanding Universal Value**

5.1.8 The retrospective Statement of Outstanding Universal Value (SoOUV) was submitted to the Department for Culture Media and Sport (DCMS) in 2010 and a version was formally adopted by the World Heritage Committee in 2013 [9, pp. 291-94]. The SoOUV forms the focus of all protection and management decisions. A copy of the SoOUV is provided in Appendix A.

**2015 Stonehenge World Heritage Site Management Plan**

5.1.9 In relation to proposals to upgrade the A303, the 2015 WHS Management Plan notes that:

> The WHS is recognised by the Department for Transport as a key environmental consideration ... Options identified would need to be assessed for their likely impact on the WHS and its attributes of OUV including the interrelationship of monuments, their relationship to the landscape and the integrity of the wider WHS landscape. Significant developments within the WHS should be assessed using the Guidance on Heritage Impact Assessments for Cultural World Heritage Properties produced by the International Commission for Monuments and Sites. ICOMOS is the advisory body to UNESCO on proposals for change affecting cultural WHSs which are referred to in NPPF Planning Practice Guidance. It provides a framework for assessing impacts on the attributes of OUV and the OUV of the WHS itself. In addition, any such significant scheme would need to undergo assessment
against the full range of economic, social and environmental impact criteria required by the planning system [5, p. 170].

5.2 Inscription criteria

5.2.1 The WHS was inscribed under three criteria:

- **Criterion (i):** The monuments of the Stonehenge, Avebury and Associated Sites demonstrate outstanding creative and technological achievements in prehistoric times.

  Stonehenge is the most architecturally sophisticated prehistoric stone circle in the world. It is unrivalled in its design and unique engineering, featuring huge horizontal stone lintels capping the outer circle and the trilithons, locked together by carefully shaped joints. It is distinguished by the unique use of two different kinds of stones (Bluestones and Sarsens), their size (the largest weighing over 40 t) and the distance they were transported (up to 240km). The sheer scale of some of the surrounding monuments is also remarkable: the Stonehenge Cursus and the Avenue are both about 3km long, while Durrington Walls is the largest known henge in Britain, around 500 m in diameter, demonstrating the ability of prehistoric peoples to conceive, design and construct features of great size and complexity.

- **Criterion (ii):** The World Heritage property provides an outstanding illustration of the evolution of monument construction and of the continual use and shaping of the landscape over more than 2000 years, from the early Neolithic to the Bronze Age. The monuments and landscape have had an unwavering influence on architects, artists, historians and archaeologists, and still retain a huge potential for future research.

  The megalithic and earthen monuments of the World Heritage property demonstrate the shaping of the landscape through monument building for around 2000 years from circa 3700 BC, reflecting the importance and wide influence of both areas.

  Since the 12th century when Stonehenge was considered one of the wonders of the world by the chroniclers Henry de Huntington and Geoffrey de Monmouth, the Stonehenge and Avebury Sites have excited curiosity and been the subject of study and speculation. Since early investigations by John Aubrey (1626-1697), Inigo Jones (1573-1652), and William Stukeley (1687-1765), they have had an unwavering influence on architects, archaeologists, artists and historians. The two parts of the World Heritage property provide an excellent opportunity for further research.

  Today, the property has spiritual associations for some.

- **Criterion (iii):** The complexes of monuments at Stonehenge and Avebury provide an exceptional insight into the funerary and ceremonial practices in Britain in the Neolithic and Bronze Age. Together with their settings and associated sites, they form landscapes without parallel.

  The design, position and interrelationship of the monuments and sites are evidence of a wealthy and highly organised prehistoric society able to impose its concepts on the environment. An outstanding example is the alignment of the Stonehenge Avenue (probably a processional route) and Stonehenge
A profound insight into the changing mortuary culture of the periods is provided by the use of Stonehenge as a cremation cemetery, by the West Kennet Long Barrow, the largest known Neolithic stone-chambered collective tomb in southern England, and by the hundreds of other burial sites illustrating evolving funerary rites [28].

5.3 Statement of Outstanding Universal Value

5.3.1 The retrospective Statement of Outstanding Universal Value (SoOUV) is reproduced in full at Appendix A. The SoOUV clearly sets outs in detail the reasons why and the criterion for the WHS having Outstanding Universal Value and how the WHS embodies this. It also sets out the Integrity and Authenticity of the WHS as well as detailing the future protection and management requirements of the World Heritage.

5.4 Attributes of Outstanding Universal Value

5.4.1 A number of attributes expressing the OUV of the WHS have been identified from the Statement of OUV. Attributes are the direct tangible expression of the OUV of the property [25, p. 100]. At Stonehenge and Avebury, all these attributes are ultimately derived from the 2008 Statement of Significance [29] and the nomination and evaluation documentation of 1985/6 [28]. Taken together the attributes define the reasons for the OUV of the Stonehenge and Avebury WHS [5, p. 261].

5.4.2 The 2015 Management Plan [5] identifies seven Attributes of OUV for the entirety of the WHS:

1) Stonehenge itself as a globally famous and iconic monument.
2) The physical remains of the Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to the landscape.
3) The siting of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to the landscape.
4) The design of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to the skies and astronomy.
5) The siting of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to each other.
6) The disposition, physical remains and settings of the key Neolithic and Bronze Age funerary, ceremonial and other monuments and sites of the period, which together form a landscape without parallel.
7) The influence of the remains of the Neolithic and Bronze Age funerary and
ceremonial monuments and their landscape setting on architects, artists, historians, archaeologists and others.

5.4.3 All of these attributes are represented within the Stonehenge part of the WHS.

5.4.4 The following extracts from the 2015 Management Plan explain the Attributes in more detail, particularly in relation to the Stonehenge part of the WHS:

(1) **Stonehenge itself as a globally famous and iconic monument**

Stonehenge itself as a globally famous and iconic monument is an attribute of OUV. This monument is both an important and enduring symbol of [people’s] prehistoric past, and an internationally recognised symbol of Britain. It is difficult to overstate its importance as one of the best-known and most inspirational monuments in the world.

(2) **The physical remains of the Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to the landscape**

In the Stonehenge and Avebury WHS, the physical remains of the Neolithic and Bronze Age ceremonial and funerary monuments and associated sites are an attribute of OUV. In particular, it is considered that Stonehenge, the most architecturally sophisticated stone circle in the world, is a masterpiece of human creative genius. This monument, a focal point within the WHS, survives well and is unrivalled in its design and unique engineering.

In a similar way, the physical remains of some other monuments at Stonehenge are also considered to be masterpieces of human creative genius. These include the henge at Durrington Walls, the largest in Britain, which demonstrates the masterly ability of prehistoric peoples to organise and construct massive structures. Other such massive monuments include the Stonehenge Cursus and the Stonehenge Avenue. All of these sites are relatively well-preserved and have upstanding remains.

The physical remains of other Neolithic and Bronze Age ceremonial and funerary monuments are also considered to be attributes of OUV, and bear an exceptional testimony to a now-disappeared civilization. As well as the sites described [above], they include, at Stonehenge: Woodhenge, the Lesser Cursus and the densest concentration of Bronze Age burial mounds in Britain…They provide an insight into the mortuary and ceremonial practices of the period. Some of these sites and monuments have upstanding, visible remains. Others, such as the Lesser Cursus at Stonehenge … are now ploughed flat and survive only below ground; however, they retain some of their integrity through the survival of buried archaeological remains.

(3) **The siting of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to the landscape**

The siting of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to the landscape including rivers and water is also an attribute of OUV. For example, it is now known that the monuments of Durrington Walls and Stonehenge were linked via their Avenues to the River
Avon and possibly thence to each other...Some barrow cemeteries were clearly built on prominent ridge-lines for their visual impact and in line with earlier burials...Whatever its original function, the Stonehenge Cursus seems to have been laid out in such a way as to link outward views over the Till and Avon valleys.

(4) The design of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to the skies and astronomy

The design of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to the skies and astronomy is an attribute of OUV. A number of sites within the WHS are aligned on the midsummer sunrise and midwinter sunset axes, for example, Stonehenge, Woodhenge and parts of the Stonehenge Avenue. At Stonehenge, this factor appears to have been an extremely important one from the earliest stages of the monument and throughout its subsequent development. The midwinter sunrise–midsummer sunset solstitial axis may also be of importance. In addition, the solstitial sightline extending south-eastwards from the southern circle at Durrington Walls is of importance as well as the northwest-southeast axis of the station-stone rectangle at Stonehenge, which remains the most plausible and striking manifestation of a possible alignment upon the moon when close to its extreme most southerly rising or most northerly setting points.

(5) The siting of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to each other

The siting of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to each other is an attribute of OUV. For example, from Stonehenge itself, a number of important barrow groups are visible, such as those on King Barrow Ridge and Normanton Down. These barrow cemeteries were deliberately built on prominent ridgelines and are clearly visible from Stonehenge, and indeed from each other, as well as from other monuments such as the Cursus. Other barrow groups further away, such as the Lake Barrows, would also have been visible from Stonehenge.

It is not only barrow groups which are attributes of OUV in this way. There are clusters of other monuments which are not visible from Stonehenge, and never would have been. For example, the complex of sites in the Durrington Walls area includes its avenue leading from the river to the henge, its associated settlement, Woodhenge, and other Neolithic and Bronze Age barrows and sites along the ridge south of Woodhenge. A similar monument cluster occurs around the Stonehenge Cursus, which attracted later Bronze Age barrow groups.

(6) The disposition, physical remains and settings of the key Neolithic and Bronze Age funerary, ceremonial and other monuments and sites of the period, which together form a landscape without parallel

The disposition, physical remains and settings of the Neolithic and Bronze Age funerary, ceremonial and other monuments and sites of the period, which together form a landscape without parallel are an attribute of OUV. The design, position and interrelationship of the monuments are evidence of a highly
organised prehistoric society able to impose its concepts on the environment. In some parts of the WHS, monuments or groups of monuments, such as the King Barrow Ridge barrow cemetery, Stonehenge and the Normanton Down barrow cemetery, are so well-preserved and prominent that they and their physical and topographical interrelationships form immediately recognisable parts of an archaeological landscape...In other parts of the WHS, however, the monuments and sites have become degraded or masked and their significance and physical relationships to one another and the landscape are no longer visible to the naked eye, but are nevertheless equally attributes of the Site’s OUV. There are also areas which appear to have been deliberately left empty of monuments. These are important for our constantly developing understanding of the landscape as a whole.

(7) The influence of the remains of the Neolithic and Bronze Age funerary and ceremonial monuments and their landscape setting on architects, artists, historians, archaeologists and others

The influence of the remains of Neolithic and Bronze Age funerary and ceremonial monuments and their landscape settings on architects, artists, historians, archaeologists and others is an attribute of OUV. For example, Stonehenge has been depicted in a number of key views by artists of the British Romantic Movement of the 18th and 19th centuries.

The WHS has been pivotal in the development of archaeology from early antiquarian investigations by Aubrey and Stukeley in the late 17th and early 18th centuries. Both the Avebury and Stonehenge parts of the WHS have continued since then as an important focus for evolving archaeological practice and techniques.

Integrity

5.4.5 Integrity is a measure of the wholeness and intactness of the natural and/or cultural heritage and its attributes. The Operational Guidelines for the Implementation of the World Heritage Convention note that examining the conditions of integrity, therefore requires assessing the extent to which the property:

a) Includes all elements necessary to express its Outstanding Universal Value;

b) Is of adequate size to ensure the complete representation of the features and processes which convey the property’s significance; and

c) Suffers from adverse effects of development and/or neglect [25].

5.4.6 For cultural properties, the physical fabric of the property and/or its significant features should be in good condition, and the impact of deterioration processes controlled. A significant proportion of the elements necessary to convey the totality of the value conveyed by the property should be included. Relationships and dynamic functions present in cultural landscapes, historic towns or other living properties essential to their distinctive character should also be maintained [25, p. para 89].

5.4.7 The SoOUV [9] notes that:
The boundaries of the property capture the attributes that together convey Outstanding Universal Value at Stonehenge and Avebury. They contain the major Neolithic and Bronze Age monuments that exemplify the creative genius and technological skills for which the property is inscribed. The Avebury and Stonehenge landscapes are extensive, both being around 25 square kilometres, and capture the relationship between the monuments as well as their landscape setting.

At Avebury the boundary was extended in 2008 to include East Kennet Long Barrow and Fyfield Down with its extensive Bronze Age field system and naturally occurring Sarsen Stones. At Stonehenge the boundary will be reviewed to consider the possible inclusion of related, significant monuments nearby such as Robin Hood’s Ball, a Neolithic causewayed enclosure.

5.4.8 This indicates that monuments outside the current boundary of the WHS may still contribute to its OUV:

The setting of some key monuments extends beyond the boundary. Provision of buffer zones or planning guidance based on a comprehensive setting study should be considered to protect the setting of both individual monuments and the overall setting of the property.

5.4.9 This issue is also raised in the 2015 Management Plan [5]:

The survival of the Neolithic and Bronze Age monuments at both Stonehenge and Avebury is exceptional and remarkable given their age – they were built and used between around 3700 and 1600 BC. Stone and earth monuments retain their original design and materials. The timber structures have disappeared but postholes indicate their location. Monuments have been regularly maintained and repaired as necessary.

The presence of busy main roads going through the World Heritage property impacts adversely on its integrity. The roads sever the relationship between Stonehenge and its surrounding monuments, notably the A344 which separates the Stone Circle from the Avenue ... Roads and vehicles also cause damage to the fabric of some monuments while traffic noise and visual intrusion have a negative impact on their settings. The incremental impact of highway-related clutter needs to be carefully managed.

5.4.10 While the A344 has now been removed, the A303 continues to adversely affect the integrity of the World Heritage property:

Development pressures are present and require careful management. Impacts from existing intrusive development should be mitigated where possible.

Authenticity

5.4.11 In terms of authenticity, the 2013 SoOUV [9] highlights the highly authentic nature of the site and the importance of the relationships between monuments stating that:

Interventions have been limited mainly to excavations and the re-erection of some fallen or buried stones to their known positions in the early and mid-
twentieth century in order to improve understanding. Ploughing, burrowing animals and early excavation have resulted in some losses but what remains is remarkable in its completeness and concentration. The materials and substance of the archaeology supported by the archaeological archives continue to provide an authentic testimony to prehistoric technological and creative achievement.

This survival and the huge potential of buried archaeology make the property an extremely important resource for archaeological research, which continues to uncover new evidence and expand our understanding of prehistory. Present day research has enormously improved our understanding of the property.

The known principal monuments largely remain in situ and many are still dominant features in the rural landscape. Their form and design are well-preserved and visitors are easily able to appreciate their location, setting and interrelationships which in combination represent landscapes without parallel.

At Stonehenge several monuments have retained their alignment on the Solstice sunrise and sunset, including the Stone Circle, the Avenue, Woodhenge, and the Durrington Walls Southern Circle and its Avenue.

Although the original ceremonial use of the monuments is not known, they retain spiritual significance for some people, and many still gather at both stone circles to celebrate the Solstice and other observations. Stonehenge is known and valued by many more as the most famous prehistoric monument in the world.

There is a need to strengthen understanding of the overall relationship between remains, both buried and standing, at Stonehenge and at Avebury.

6 Assessment of Scheme alternatives

6.1 Scheme history and development

6.1.1 Proposals for the improvement of the A303 between Amesbury and Berwick Down have been the subject of extensive study and consultation since 1991. These proposals, and the wider context of the Scheme, are detailed in the 2017 Technical Appraisal Report [13].

6.2 Option identification and selection

6.2.1 Following a Feasibility Study to identify opportunities and investment solutions for improving the A303, A358 and A30 corridor [31] the Scheme was included in the Roads Investment Strategy in 2014.

6.2.2 From January 2016, the Option Identification and Option Selection stages included three design fix milestones:

a) Design Fix A – Corridor identification and initial sifting of corridors;

b) Design Fix B – Design development of route options within remaining corridors; and
Design Fix C – Initial appraisal and sifting of options to identify route options to take forward for consideration by the Department for Transport

6.2.3 This staged approach aimed to assist decision-makers to understand the potential positive and negative impacts on the WHS at key stages in the project’s overall development. This aimed to allow impacts to be weighed against other environmental, economic, social and transport related issues in determining the preferred approach for the scheme.

Design Fix A

6.2.4 There have been a wide range of proposed solutions to traffic problems on the A303 at Stonehenge over many years. A review was undertaken of some 60 route options that have been proposed by Government, stakeholders and the public in the past. These options were grouped into a series of corridors which contained route options with similar characteristics. This resulted in eight corridors:

a) ‘Corridor A – Surface routes north of the existing A303 (wholly outside WHS);

b) Corridor B – Surface routes north of the existing A303 (partially inside WHS);

c) Corridor C – Surface routes within 1km of the existing A303 (as the route options pass through the WHS);

d) Corridor D – Routes including a tunnel (at least partially within the WHS);

e) Corridor E – Surface routes south of the existing A303 (at least partially inside WHS);

f) Corridor F (North) – Surface routes south of the existing A303 (wholly outside WHS) and north of Salisbury;

g) Corridor F (South) – Surface routes south of the existing A303 (wholly outside WHS) and north of Salisbury, further south than Corridor F (North);

h) Corridor G – Surface routes south of the existing A303 (wholly outside WHS) and south of Salisbury’ [13, p. 3].

6.2.5 These corridors were subject to a three-stage options appraisal applying three sets of established criteria that are applied to all strategic road schemes: the Client Scheme Requirements (CSRs); the Web-based Transport Appraisal Guidance’s (WebTAG) Early Assessment and Sifting Tool (EAST); and environmental aspects of the National Policy Statement for National Networks (NPSNN).

6.2.6 Design Fix A recommended that two corridors should be taken forward for further, more detailed development and assessment:

a) ‘Corridor D (a bored tunnel route within the WHS). A tunnelled route through the WHS would reduce severance within the WHS and improve the setting of key assets such as Stonehenge. The surface elements may cause adverse effects on the character of the WHS but it is considered that substantial harm can be avoided.
b) **Corridors F (north) and Corridor F (south)** (a surface level route bypassing the WHS to the south). Corridor F surface route options to the south of the WHS would remove the A303 from the WHS in its entirety. This would bring substantial benefits by reducing severance and improving the setting of key assets, including the Stonehenge monument. These benefits would need to be balanced against adverse environmental effects of constructing a longer route within a high quality, unspoilt landscape with the associated loss of habitats. Surface route options to the south of the WHS would also offer a less direct route for through traffic and would therefore offer reduced transport benefits. More traffic would also remain or divert onto local roads, giving rise to adverse impacts on local villages and communities.’ [13, p. 3].

**Design Fix B**

6.2.7 Design Fix B involved identifying the most appropriate route options for assessment within the two better performing corridors identified from Design Fix A. It recommended six route options within Corridor D and three route options within Corridor F to be taken forward for initial appraisal and sifting.

**Design Fix C**

6.2.8 Design Fix C assessed four options within Corridor D and three options in Corridor F. The routes were assessed against the Options Assessment Framework contained within the WebTAG Transport Appraisal Process, which is based around the Transport Business Case Five Case Model criteria. This approach assesses whether schemes:

a) Are supported by a robust case for change that fits with wider public policy objectives – the ‘strategic case’;

b) Demonstrate value for money – the ‘economic case’;

c) Are commercially viable – the ‘commercial case’;

d) Are financially affordable – the ‘financial case’; and

e) Are achievable – the ‘management case’ [32].

6.2.9 Primary considerations at this stage were the Strategic Fit assessment (fit with policy and CSRs) and the Value for Money assessment which includes the impact on the economy and the environment.

6.2.10 ‘Route options incorporating 4.5km tunnels were assessed as having significantly higher estimated scheme costs that were considered to be unaffordable and were not considered further in the assessment.’ [13, p. 6].

6.2.11 The option identification process was supported by HIA. An ‘Outline Approach Document’ agreed with HMAG. A high-level HIA (Iteration 1) was undertaken for the route options identified at Design Fix B, and was reported as part of the Design Fix C assessment in December 2016 [33].

6.2.12 ‘As part of the option selection and assessment work on revised Route Options D031 and D032, a programme of geophysical surveys was undertaken to investigate the possible presence of buried archaeological features along the two options. This identified two Neolithic long barrows and a henge-type enclosure to
the east of the A360 and within the likely construction footprint of both options. These were considered to be important archaeological features that contribute to the OUV of the WHS. These features were considered to be adversely affected by the D031 and D032 route options and the decision was made to adjust both route options by moving them locally further to the south to avoid physical impact on these assets.' [13, p. 9].

6.2.13 Revised options D031 and D032 were renamed D061 and D062.

**Further appraisal of route options**

6.2.14 Routes D061, D062 and F010 were identified as the better performing routes against the criteria above (see 6.2.8). Further analysis of these three routes included assessment of the following areas: traffic and journey times, scheme costs, economic, social impact, safety, operational, technology and maintenance, environmental aspects, programme compliance and the CSRs.

6.2.15 Although F010, the southern surface route, was found to have benefits to heritage, as it avoided the WHS, it was found to have other significant environmental impacts and community severance issues. It also did not perform as well as the preferred route against transport and economic objectives, with reduced economic benefit over the life-time of the project, increased use of local roads, increased carbon emissions and, due to its longer length, increased accident rates.

6.2.16 A second version of the high-level HIA (Iteration 2) was prepared to assess route options D061, D062 and F010 [34]. These route options were also subject to a further full WebTAG appraisal to determine the route options to be taken forward to public consultation and further design development. The assessment in the Technical Appraisal Report included a third iteration of the HIA, which formed part of the Historic Environment Assessment [13].

6.2.17 Iterations 1, 2 and 3 of the HIA involved:

a) Recognising the key attributes noted in the SoOUV and focussing on the seven attributes of OUV identified in the 2015 Management Plan [5];

b) Assessing impacts on individual assets within and around the WHS;

c) Assessing the likely impact of route options on the setting and fabric of individual assets, in a tabular format;

d) An overarching narrative assessment of potential impact on the attributes of OUV and integrity and authenticity of the WHS.

**Public and stakeholder consultation**

6.2.18 Two route options within Corridor D were selected for public and stakeholder consultation to further develop the design and undertake further appraisal to determine the preferred route for the scheme. These were:

a) Route Option D061 – 2.9km length tunnel with route running north of Winterbourne Stoke, the eastern tunnel portal located east of The Avenue and the western tunnel portal located west of Normanton Gorse;
b) Route Option D062 – 2.9km length tunnel with route running south of Winterbourne Stoke, the eastern tunnel portal located east of The Avenue and the western tunnel portal located west of Normanton Gorse.

6.2.19 Consultation on the above two route options was undertaken between 12 January to 5 March 2017, and public responses subsequently helped to inform route selection and refine the initial design before it was recommended to the UK Government.

6.2.20 The most significant improvements to the design, following public consultation, have been changes to the location of the western tunnel portal and the approach route through the western half of the WHS. The preferred route is now much closer to the line of the existing A303, avoiding impacts on newly-discovered barrows just to the east of the A360 (the ‘Diamond Group’ of Neolithic long barrows on the former D061/062 approach alignment and a hengiform enclosure; the Diamond Group also including a number of other Neolithic and Bronze Age sites, notably the cluster of Scheduled round barrows just to the north east of the Diamond). The modified alignment also avoids any risk of the road intruding on the view of the setting sun from Stonehenge during the winter solstice and reduces impacts on the Royal Society for the Protection of Birds (RSPB) reserve at Normanton Down.

**Detailed design**

6.2.21 On 12 September 2017, the Secretary of State for Transport announced the preferred route for dualling the A303. The detailed design of the Scheme is now in progress to support the submission of the DCO application in late 2018.

7 **Consultation**

7.1 **Consultation framework**

7.1.1 Effective stakeholder engagement and consultation is intrinsic to and fundamental for the success of the Proposed Scheme.

7.1.2 Section 4 of the Environmental Scoping Report sets out how consultation will be undertaken for the Scheme as part of the DCO application. With regards to consultation for the HIA, it is proposed to follow and tie in with the consultation process as set out in this document, including engagement with landowners, local communities, interest groups and the wider public.

7.1.3 This HIA Scoping Report has been developed following consultation with heritage working groups set up to advise the Scheme, including HMAG and the Scientific Committee. These groups will be continuously consulted throughout the development of the HIA.

7.1.4 Other Scheme working groups will also be consulted as the HIA is developed and progresses. These include:

- The Drainage and Flood Management Working Group;
- The Environmental Working Group;
- The Community Working Group;
- The Traffic Modelling Working Group;
- The Road Users Working Group (NMUs PROWs, BOATs, Local Roads); and
- The Economic and Business Case Working Group.

7.1.5 A third ICOMOS Advisory Mission has been invited in early 2018 to advise on the Preferred Route.

7.1.6 Feedback received from stakeholders, including the WHS Steering Committees and Partnership Panel, Scheme working groups, advisory bodies and the third ICOMOS Advisory Mission, will be taken into consideration by the project team and fed into the final HIA that will be submitted as part of the EIA and the DCO application.

7.1.7 The calendar for consultation for the HIA includes:

a) Consultation meetings with HMAG, at least once a month;
b) Monthly meetings of the ICOMOS and UNESCO Working Group, which includes HMAG, DCMS, Highways England and their Technical Partner;
c) Attendance at the Environmental Working Group, the Community Working Group and other working groups as relevant, to discuss progress and provide presentations on the HIA and gain feedback;
d) Quarterly meetings of the Scientific Committee;
e) Design Team workshops to be attended by members of HMAG and the Technical Partner’s heritage specialists to encourage the development of a design that incorporates elements that aim to protect the OUV of the WHS;
f) ICOMOS Advisory Mission in early 2018; and
g) Attendance at meetings of the WHS Steering Committees and Partnership Panel to discuss progress and provide presentations on the HIA and gain feedback;
h) Attendance at meetings of the Avebury and Stonehenge Archaeological and Historical Research Group (ASAHRG) to discuss progress and provide presentations on the HIA and gain feedback;
i) Public Consultation as set out in Section 4 of the Environmental Scoping Report in February and March 2018 – to engage with interested parties, interest groups and the wider public.
8 Potential Scheme impacts on the WHS and its OUV

8.1 Overall impacts

8.1.1 Many of the archaeological sites and monuments within the Stonehenge component of the WHS are the physical remains of Neolithic and Bronze Age funerary and ceremonial monuments and associated sites, and are therefore attributes of the OUV of the World Heritage property. The associated sites include settlement and other evidence in the form of archaeological features such as pit clusters and artefact scatters in the ploughzone. The archaeological sites and monuments also form part of other attributes through their relationships and the surrounding landscape and with the skies or astronomical phenomena. The A303 currently severs the Avenue and affects the setting of both individual monuments and the relationships between them. The existing A303 and A360 both also physically impact a number of round barrows.

8.1.2 The present A303 currently has a very large adverse impact on the OUV of the WHS. Elements of the Proposed Scheme would be beneficial, namely the insertion of the road in a tunnel in the vicinity of the Stonehenge monument, the reunification of the Avenue where it is truncated by the existing A303, the realignment of the A303 and A360 away from the Winterbourne Stoke Crossroads barrow cemetery and the improvement of junctions which would alleviate the impact of traffic congestion in the WHS. These aspects will reduce the current adverse impacts from the present A303 and A360 on the WHS. However, the Proposed Scheme may introduce additional adverse impacts in some areas – there is potential for some physical loss of archaeological remains, and the scheme would change interrelationships and the setting of discrete sites, monument groups and the historic landscape context. Both beneficial and adverse effects will be taken into account in arriving at an assessment of the overall significance of effect on attributes of OUV.

8.2 Types of impact

8.2.1 The HIA will assess the likely impacts of the Scheme on the attributes of OUV in the light of current policy, guidance and understanding of significance. It will consider the attributes of OUV identified in the Management Plan [5] and the assessments of integrity and authenticity set out in the SoOUV (Appendix A).

8.2.2 Potential impacts are changes that may occur as a result of the Scheme, and which can be identified before agreed mitigation has been taken into account. The HIA will take into account mitigation inbuilt in the design, such as deep cuttings. In assessing the effect of impacts of the Scheme on the OUV of the WHS, assessment will focus on heritage assets, or asset groups, that express one or more of the seven attributes of OUV.

8.2.3 The HIA will describe the anticipated type and characteristics of potential impacts, including their nature, magnitude and spatial extent, intensity, complexity and probability and their expected onset, duration, frequency and reversibility. It will also identify potential effects and the time period within which significant effects may arise.
8.2.4 All of these forms of impact, and others identified, whether temporary or permanent, will be addressed in the HIA.

**Direct impacts**

8.2.5 Direct impacts are those that arise as straightforward consequences of the Scheme. For archaeological remains and historic structures, this can mean physical damage to, or physical improvement of, the fabric of the asset. It can also mean impacts on the setting of cultural heritage assets. Changes in noise, light, pollution and in traffic flows are classed as direct impacts. A direct impact on attributes of OUV occurs when a heritage asset or a feature that contributes to the attributes of OUV is partially or fully removed or altered, or their setting is changed. Direct impacts can be both positive and negative and lead to strengthening or degradation of the authenticity and integrity of the WHS.

8.2.6 It may be necessary to consider the predicted increase or decrease in an impact over a number of years from particular sources, for example an increase or decrease in air pollution or noise, in relation to predicted traffic volumes and particular monument groups that are attributes of OUV.

**Direct impacts: physical impacts**

8.2.7 Direct physical impacts will largely be contained within the construction footprint of the development and can occur as the result of all forms of construction activity. However, direct physical impacts may also arise due to environmental mitigation measures such as planting, ecological topsoil translocation, ecology ponds, flood compensation areas, landscaping and landscape planting, hedgerow removal, boundary and access changes and noise barriers etc.. The WHS Woodland Strategy has undertaken careful modelling of where trees are appropriate, and has identified areas of the WHS where planting is undesirable, for example where trees risk damaging archaeology or obscuring key views between monuments [5, p. 84] [35]. Environmental mitigation within the WHS will be designed to avoid impacting heritage assets that contribute to attributes of OUV; opportunities to enhance both the historic and natural environment together (e.g. through grassland restoration without earth movements/deep ploughing) will be actively sought.

8.2.8 All forms of potential direct impacts will be assessed as part of the HIA.

8.2.9 It is anticipated that direct, physical impacts will be assessed as adverse, as destruction of physical remains of the Neolithic and Bronze Age funerary and ceremonial monuments and associated sites, that are themselves an attribute of OUV, can only be a negative impact. Assessment of whether the impact is negligible, minor, moderate or major is a professional judgement based on the proportion of the asset affected, the degree to which the part of the asset would be affected (ranging from minor surface disturbance to complete destruction) and the condition of the asset at present.

**Direct impacts: setting impacts**

8.2.10 The attributes of OUV stress the importance of the siting of the monuments in relation to the landscape, the design of the monuments in relation to the skies and astronomy, the siting of the monuments in relationship to each other, and the
siting, physical remains and setting of the monuments that form a landscape without parallel. These attributes are all ways of expressing and looking at the interrelationships, influences and settings of the monuments and sites within the WHS and how these contribute to its OUV.

8.2.11 The 2005 ICOMOS Xi’an Declaration on the Conservation of the Setting of Heritage Structures, Sites and Areas, states that:

‘1. The setting of a heritage structure, site or area is defined as the immediate and extended environment that is part of, or contributes to, its significance and distinctive character.

Beyond the physical and visual aspects, the setting includes interaction with the natural environment; past or present social or spiritual practices, customs, traditional knowledge, use or activities and other forms of intangible cultural heritage aspects that created and form the space as well as the current and dynamic cultural, social and economic context.

2. Heritage structures, sites or areas of various scales, including individual buildings or designed spaces, historic cities or urban landscapes, landscapes, seascapes, cultural routes and archaeological sites, derive their significance and distinctive character from their perceived social and spiritual, historic, artistic, aesthetic, natural, scientific, or other cultural values. They also derive their significance and distinctive character from their meaningful relationships with their physical, visual, spiritual and other cultural context and settings.

These relationships can be the result of a conscious and planned creative act, spiritual belief, historical events, use or a cumulative and organic process over time through cultural tradition’ [35].

8.2.12 In the broadest terms the setting of a heritage asset comprises the objects and conditions around it, and within which it is perceived and experienced; and in this sense all heritage assets have settings. Not all settings, however, make a positive or negative contribution to the significance of the assets they encompass. The setting will be a combination of views, other historic features and their relationships to the asset, ambience (topography, vegetation, noise, light and other sensory experiences such as smell and vibration) and context (what is known or thought about the asset, but not immediately experienced through the senses).

8.2.13 The Proposed Scheme may adversely affect attributes of OUV that relate to the settings of monuments and the relationships between them, and on the setting of the WHS as a whole. Adverse effects could affect attributes individually or in combination and could arise from a number of factors, including but not limited to:

a) Presence of new road infrastructure including carriageways, tunnel portals, lighting, signage etc. in views to and from monuments and across the wider landscape of the WHS and severance of relationships (visual and physical) between monuments;

b) Presence of moving and stationary vehicles in views to and from monuments and across the wider landscape of the WHS including vehicles on byways open to all traffic;
c) Severance of relationships (visual and physical) between monuments and the landscape;
d) Impact on the visual prominence or dominance of monuments;
e) Alterations to established astronomical relationships; and
f) Increased light intrusion.

8.2.14 Conversely the proposed development could benefit attributes of OUV in a number of ways, including, but not limited to:

a) Removal of existing road infrastructure;
b) Reduction in aural and visual intrusion by the removal of or reducing the number of moving and stationary traffic;
c) Re-establishment of the visual prominence or dominance of monuments;
d) Removal of intrusions that disrupt astronomical relationships;
e) Improvement of lighting ambience and dark skies; and
f) **Removal of severance of relationships (visual and physical)**. Reconnection of relationships between monuments through removal of road infrastructure and traffic. In the long term, the Scheme aims to leave a legacy improving connectivity and access, facilitating the realisation of a wider Stonehenge, Avebury and Associated Sites WHS vision including opportunities that better present the WHS as a whole to visitors and local communities – e.g. signed/interpretative walking access points, improving public and local visitor access.

**Indirect or secondary impacts**

8.2.15 An indirect or secondary impact is an impact arising from the Scheme via a complex route, where the connection between the Scheme and the impact is complicated, unpredictable or remote. These may include:

a) Impacts related to the severance or reuniting of historic landscapes and agricultural land parcels, that result in changes to land-use patterns, leading to improvements to, or to degradation and erosion of, land management regimes for monuments that contribute to the OUV of the WHS;
b) Changes in visitor footfall numbers in parts of the WHS during construction and operation of the Scheme, which lead to the degradation of, or improvement to, the conservation of monuments that contribute to the OUV of the WHS – whether situated in the Stonehenge or Avebury parts of the WHS;
c) Impacts on communities including local and visitor perceptions of the significance and influences of cultural heritage, intangible and sacred heritage, and economics will be covered in the EIA in the People and Communities chapter and fed into the HIA; and
d) Increased damage to the earthworks of monuments that contribute to the OUV of the WHS through changes to the range of burrowing animals due to the construction of the Scheme.
Temporal nature of impacts

8.2.16 Temporary impacts may be short-, medium- or long-term but they are reversible; irreversible impacts are described as permanent. Short-term would normally mean impacts that did not last longer than the construction period, medium-term impacts would persist beyond the construction period, but no more than 15 years, while long-term impacts would be longer than 15 years but are still reversible. Temporary impacts can still harm the OUV of the WHS.

8.2.17 Permanent impacts can arise from many of the activities that take place from the first day of site clearance. A temporary element of the construction process might still cause a permanent impact on some assets, while being a temporary impact on others. Monuments or Sites that contribute to the attributes of OUV cannot be replaced or regenerated if they are physically damaged or destroyed without damaging the authenticity of the World Heritage Property. All damaging impacts on the fabric of remains are, therefore, permanently negative.

8.2.18 All physical impacts are considered to be permanent and non-reversible. Impacts on the setting and visual relationships between assets that convey OUV and between those assets and the topography can be permanent (whether due to construction or operation of the Proposed Scheme) or temporary in nature.

9 Outline methodology and terms of reference for the HIA

9.1.1 The following sets out the methodology that will be employed in the development of the HIA.

9.2 Scheme to be assessed

9.2.1 The HIA will assess the impact of the Proposed Scheme on the OUV, authenticity and integrity of the Stonehenge part of the Stonehenge, Avebury and Associated Sites WHS and the attributes that convey the OUV. The HIA will assess all temporary and permanent impacts associated with the Scheme. The potential for indirect or secondary impacts on the attributes of OUV of the Avebury part of the Stonehenge, Avebury and Associated Sites WHS will also be considered as part of the HIA. The HIA will assess all elements of the Scheme including new construction within and outside the WHS where this could impact on the attributes of OUV of the WHS, including, but not limited to: the decommissioning of the existing A303 within the WHS; the realignment and decommissioning of the A360 away from the Winterbourne Stoke Crossroads barrow cemetery; construction of a new junction between the A303 and A360 outside the WHS; joining Byways 11 and 12 with a BOAT; and improvements to the junction of the B3086 and the Packway at Rollestone Corner.

9.2.2 Design principles, assumptions and limitations on design information will be clearly set out in the HIA. Horizontal and vertical alignments for the Scheme will be presented, including, but not limited to, mainline earthworks and cuttings, the heights and layouts of junctions, treatment of minor roads, bridges and viaducts, lighting and tunnel configuration, verges and variable message signs and temporary construction activities.
9.3 Approaches to impact assessment

9.3.1 The purpose of the HIA is to assess the potential negative and positive impacts of the Proposed Scheme on the OUV of the WHS. It deals only with impacts of the Proposed Scheme on the OUV and does not examine impacts on other nationally or locally significant heritage assets. These will be assessed within the Environmental Impact Assessment and Environmental Statement for the Scheme. The HIA and EIA should be read in parallel to understand the full range of impacts on the historic environment as a whole.

9.3.2 The following guidance and good practice will be relied upon in the HIA:

a) Guidance on Heritage Impact Assessments for Cultural World Heritage Properties [1];
b) Principles of the Xi’an Declaration on the Conservation of the Setting of Heritage Structures, Sites and Areas [35];
c) The Convention Concerning the Protection of the World Cultural and Natural Heritage [14];
d) The Operational Guidelines for the Implementation of the World Heritage Convention [25];
e) Managing Cultural World Heritage [UNESCO 2013];
   f) WHS Management Plan policies which form the framework for the protection of the WHS and its OUV [5]
g) National and local policy, including those relevant to setting aspects [37]; and
   h) Historic England guidelines.

9.3.3 In accordance with the ICOMOS Guidance [1], the HIA methodology will involve the following key elements:

a) Identification of heritage potentially at risk and its contribution to the OUV of the property;
b) Identification of how change or development will impact on OUV, positively or negatively;
c) Identification of how change or development will impact on integrity and authenticity, positively or negatively; and
d) Consideration of how adverse impacts of the Scheme might be mitigated.

9.3.4 The process of assessment will include the following elements:

a) Assessment of the potential impact of the Scheme on discrete assets that convey the attributes of OUV;
b) Assessment of potential impacts on asset groups that convey the attributes of OUV; and
   c) Assessment of potential overall impacts on each of the attributes of OUV of the World Heritage property, namely:
      1) Stonehenge itself as a globally famous and iconic monument;
2) The physical remains of the Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to the landscape;
3) The siting of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to the landscape;
4) The design of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to the skies and astronomy;
5) The siting of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to each other;
6) The disposition, physical remains and settings of the key Neolithic and Bronze Age funerary, ceremonial and other monuments and sites of the period, which together form a landscape without parallel; and
7) The influence of the remains of the Neolithic and Bronze Age funerary and ceremonial monuments and their landscape setting on architects, artists, historians, archaeologists and others.

9.3.5 A qualitative assessment of the likely impact of the Scheme on the fabric and setting of the designated and non-designated discrete assets that contribute to OUV will be undertaken. This will characterise the heritage resource and identify assets that convey attributes that express the OUV. The potential impacts of the removal of parts of the existing A303, construction of the new highway sections and tunnel portals, and the operation of the new road on the fabric and setting of the designated and non-designated assets that contribute to OUV will be assessed. The ‘do nothing’ scenario will also be assessed, with reference to the 2015 WHS Management Plan [5] and the 2012 WHS Condition Survey [38].

9.3.6 From this the overall impact of the Scheme upon the attributes of OUV of the World Heritage property and its Integrity and Authenticity will then be assessed.

9.4 Study area for HIA

9.4.1 The Study Area for the HIA will comprise the whole of the Stonehenge part of the Stonehenge, Avebury and Associated Sites WHS.

9.4.2 Outside the boundaries of the WHS, it will consider changes to:

- Any assets that may contribute to one or more attributes of OUV. These particular assets will be agreed with HMAG;
- The character of the setting of the WHS that contribute to attributes of OUV within the WHS.

9.4.3 The HIA will consider and assess the impact of the Scheme on all attributes of the OUV of the WH property, including the setting and relationships between the monuments within the visual envelope of the WH Property.

9.5 Data sources used and surveys undertaken

9.5.1 The following core documentation will be used to support the development of the HIA:

a) The Stonehenge, Avebury and Associated Sites Statement of Outstanding Universal Value [9];
b) The attributes of OUV set out in the Stonehenge, Avebury and Associated Sites World Heritage Site Management Plan [5];

c) The WHS inscription criteria [28]; and

d) The 2015 WHS Management Plan policies [5].

9.5.2 The following sources of information will also be consulted as part of the HIA:

a) Results of the Preliminary Outline Assessment of the impact of A303 improvements on the OUV of the WHS prepared by Historic England and the National Trust [36];

b) Results of the Outline Assessment of Options prepared by Historic England and the National Trust [37];

c) Results of the Historic Environment Assessment undertaken for the Scheme Assessment Report and the WebTAG assessment for options D061, D062 and F010 [13]; and

d) Results of the Iteration 1 [33] and Iteration 2 [34] HIA reports and the assessment undertaken for the Technical Appraisal Report [13].

9.5.3 The HIA will be drafted in close coordination with the historic environment baseline report, the Environmental Impact Assessment and the Environmental Statement, which will draw on the following sources to compile inventories to inform aspects such as the historical development of the property, its context, setting and, where appropriate, local and national values:

a) The Stonehenge, Avebury and Associated Sites World Heritage Site Management Plan [8];

b) Designated asset data for the WHS and its environs - National Heritage List for England (NHLE);

c) Non-designated asset data for the WHS and its environs - Wiltshire and Swindon Historic Environment Record (WSHER);

d) Other baseline data, including Wiltshire Historic Landscape Characterisation (HLC) data, historic mapping;

e) Data from the National Mapping Programme (NMP) assessment of the Stonehenge landscape and Salisbury Plain Training Area, which used historic and recent aerial photographs and LiDAR to identify potential archaeological sites and monuments;

f) Scheme-specific terrain modelling (DTM) covering the whole scheme area and intervisibility modelling;

g) Scheme-specific light modelling;

h) Results from major research projects within the Stonehenge landscape (subject to availability) e.g. Stonehenge Hidden Landscapes Project, Stonehenge Riverside Project; recent Historic England research;

i) Results of previous and ongoing archaeological evaluations and investigations in relation to the Scheme;

j) Readily available and relevant published results of other archaeological research within the WHS;
k) Field inspections to assess the condition, authenticity and integrity of the WHS and monuments and to assess the setting of each of the identified monument groups, the visual relationships between them and the visual relationships between them and the topography;

l) Previous studies on the relationship between the monuments that contribute to OUV and the skies and astronomy – such as a case study of the Stonehenge WHS in *Heritage Sites of Astronomy and Archaeoastronomy in the context of the UNESCO World Heritage Convention* [41];

m) The Stonehenge and Avebury WHS Condition Survey 2012 [42];

n) *The Stonehenge and Avebury WHS Woodland Strategy* [35];

o) The Stonehenge and Avebury Research Framework 2015 [40];

p) Scheme design details, viewpoints, visualisations and photomontages capturing changes to monuments, groups, relationships and settings which express or contribute to the attributes of OUV; and

q) Related topics (see below).

### 9.6 Related topics

#### Tourism Impact Assessment

9.6.1 A tourism impact assessment is being prepared as part of the HIA. The HIA will utilize the baseline data prepared as part of this assessment and draw out elements from this relevant to OUV, including integrity and authenticity. This will include changes in visitor numbers, dwell times, footfall numbers and any anticipated changes to access as a result of the Scheme that may have an impact on the OUV of the WHS. The full Tourism Impact Assessment will also be included as an appendix to the HIA.

9.6.2 The study will collect data on current visitor patterns to both the wider WHS (as a whole – including both the Stonehenge and Avebury parts of the WHS) and the Stonehenge Visitor Centre, and will review any initial plans and concept ideas that may have been developed for the A303 alongside any available information on the *visitor attendance and performance assessment* of both the WHS (using data from the National Trust) and the Visitor Centre (using data from English Heritage). Available markets will be analysed, evaluating the scale of primary and secondary resident and tourist markets available to the attractions.

9.6.3 Historic attendance to the Visitor Centre and the WHS will be analysed and related to the historic available market sizes (penetration rate analysis). Catchment areas will be defined in terms of one to two hour drivetime isochrones. The catchment isochrones will then be redrawn on the basis of the Scheme having been constructed. Using the same ratios to the new market sizes, the impact of Scheme construction will be assessed to forecast any changes in numbers and visitor behaviour.

9.6.4 The study will also consider potential Scheme impacts upon visitor access and control. It will consider approaches to addressing the loss of the ‘free’ view of the Stones from vehicles travelling along the current A303 (noting that there will be no
change to ‘free’ views of the Stones from the inalienable National Trust land surrounding the Stones that is currently, and will remain, permissive open access).

9.6.5 Alongside this quantitative assessment, a qualitative assessment will be made, with reference to any available information on the attendance performance of the WHS and the Visitor Centre, and on the characteristics and quality of the visitor experience.

**Landscape and Visual Impact Assessment**

9.6.6 A landscape and visual impact assessment (LVIA) is being prepared as part of the EIA. The HIA will utilize the baseline data and the assessment prepared as part of the LVIA and draw out elements from this relevant to OUV, in particular any assessments of changes to the visual relationships between monuments and monument groups that contribute to the attributes of OUV, visualisations and photomontages. **It will also consider views in and out of the WHS and key views related to attribute of OUV 7: the influence of the remains of the Neolithic and Bronze Age funerary and ceremonial monuments and their landscape setting on architects, artists, historians, archaeologists and others.**

9.6.7 The visual baseline will involve the preparation of a Zone of Visual Influence (ZVI) in order to show the area of land from which there could be a view of any part of the Proposed Scheme. **It will also consider previous visual sensitivity mapping of the setting of the WHS, for example those published in the WHS Management Plan [5].** In accordance with Guidelines for Landscape and Visual Impact Assessment (GLVIA³) [41], Zones of Theoretical Visibility (ZTVs) determined by computer analysis will form the basis of identifying visual receptors potentially affected by the Proposed Scheme within the LVIA. This will take account of the height of structures such as bridges and gantries.

9.6.8 Visual receptors and receptor groups that would be affected by the Proposed Scheme will be mapped and the extent and quality (amenity) of their existing views will be described. Representative, specific and illustrative viewpoints will be identified and used to illustrate effects on views where applicable. Important viewpoints for the HIA, for understanding the OUV of the WHS, will be discussed and agreed with HMAG. **Both the visibility and the experience of relationships, including severance, will be considered.** The importance of monuments, monument groups and associated sites and setting that contribute to the attributes of OUV of the WHS will be recorded and mapped.

9.6.9 The assessment will also take into consideration any committed development that may impact the OUV of the WHS (i.e. developments with planning consent and/or development allocations in adopted local plans, Ministry of Defence development plans), if they will be completed before the Proposed Scheme is under construction, or they will be treated as part of the cumulative assessment.

9.6.10 Photomontages from principal locations close to the three main junctions and structures, including the Countess Roundabout; the east and west tunnel portals; the Long Barrow grade separated junction and the River Till Viaduct will be prepared in accordance with Landscape Institute Advice Note 1/11: Photography and photomontage in landscape and visual impact assessment [42] and

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³ GLVIA³ is the industry standard guidance for Landscape and Visual Impact Assessment in the UK.
Landscape Institute Guidance Note 02/17: visual representation of development proposals [43]. Where key to understanding the OUV of the WHS and its setting, other visualisations and photomontages will be prepared from specific, agreed viewpoints.

9.6.11 The LVIA will include a summary of likely significant visual effects for visual receptor groups identified within the study area. Schedules will be prepared to support these summaries and will be illustrated on a series of Visual Effects Drawings (VED) in line with Annex 2: Assessment of Visual Effects in Interim Advice Note 135/10 Landscape and Visual Effects Assessment [44]. The HIA will draw out those elements of the likely significant visual effects relevant to the OUV of the WHS.

9.6.12 Site photographs will, as far as practicable, be captured during both summer and winter months.


**Lighting**

9.6.14 An assessment of artificial lighting visible within the WHS, and its impact on the OUV of the WHS, will be undertaken as part of the HIA. This will include lighting outside the WHS boundary that affects the attributes of OUV. The work will include consideration of temporary and permanent Scheme lighting impacts on setting, ambience, skyline and celestial axes in relation to monuments, monument groups and associated sites that contribute to the attributes of OUV of the WHS.

9.6.15 A review will be undertaken of dark skies and celestial alignments in relation to monuments, monument groups and associated sites that contribute to the OUV. The current ‘do-nothing’ scenario and how that impacts on dark skies and the celestial alignments key to the attributes of OUV will also be assessed. Night time lighting situations for the Scheme, including a review of changes in lux levels and lighting ambience over the ‘do-nothing’ baseline scenario, that are considered to generate a substantive change (adverse or beneficial), will be reviewed for their impact on the attributes of OUV. An assessment of the sky glow effect of lighting of the Proposed Scheme during both the construction (temporary lighting) and operation (permanent lighting) phases will also be undertaken. The assessment will be quantitative, based on calculation of the upward light ratio for the installed luminaire, the colour rendering and temperature of the light source; the results will be presented as iso-contour plots.

**Visualisations, aural aspects and viewpoints**

9.6.16 The baseline setting assessment for the HIA will note current visual and non-visual impacts, including aural (noise) impacts and sensory experiences such as smell and vibration, and will draw on Zone of Theoretical Visibility (ZTV) and visualisations. Related information including noise and air quality contour plots and lighting iso-contour plots will also be reviewed as part of the baseline setting assessment for the HIA.
9.6.17 Assessment of aural impacts and changes in vibration levels will be undertaken by the Noise and Vibration team for the Technical Partner. This information will be fed into the HIA, where it is relevant to the OUV of the WHS.

9.6.18 Although views of or from an asset, sounds and our understanding of the historic relationships between places play an important part in setting, the way in which an asset is experienced in its setting is also influenced by other environmental factors such as dust, vibration, ambience, smells from other land uses in the vicinity and disruption to interrelationships. These will all be considered as part of the HIA baseline assessment.

Viewpoints

9.6.19 Important viewpoints for the HIA, for understanding the OUV of the WHS within the WHS landscape and peripheral to it, will be discussed and agreed with HMAG. Key viewpoints considered important by local communities, visitors, road users and those for whom the WHS has spiritual associations will be considered. Viewpoints will also include those used by artists of the British Romantic Movement of the 18th and 19th centuries, and those of other renowned artists. Research into artists’ views and the artistic influences of the landscape will be undertaken as part of the HIA.

9.6.20 Visits to important viewpoints for the HIA will be undertaken to assess the physical surroundings and setting of monuments, monument groups and associated sites, key views, intervisibility and interrelationships between them and views to the Proposed Scheme and how that impacts on the setting, key views, intervisibility and interrelationships. A record of the site visits will be made using digital photography.

Visualisations

9.6.21 A digital model of the landscape will be produced by the Technical Partner’s Visualisation and Virtual Reality Team. The digital model will be used to create fully rendered views from the key points agreed by HMAG. The views will then be explored in Augmented Reality ("AR") such that, from a selected view point, the viewer will be able to rotate through 360 degrees or zoom in/out from that agreed viewpoint using tablet computers and virtual reality headsets. It is anticipated that these will be available at public consultation events and will be provided to the ICOMOS Advisory Mission.

9.6.22 The base model (that is the existing landscape) will be created using digital terrain data and aerial photographs. Features such as Stonehenge have been scanned to create very realistic 3D representations. The Scheme model will then be integrated into the model to include the proposed horizontal and vertical highway alignment, junctions, tunnel portals, bridges and viaducts, landscaping, lighting and roadside features.

9.6.23 Photomontages will also be produced as part of the LVIA.
9.7 Asset groups

Asset groups within the WHS

9.7.1 To facilitate assessment, heritage assets will be grouped with reference to the attributes of OUV in relation to their location (e.g. proximity and topography), date and interrelationships (e.g. intervisibility and grouping). The initial definition of asset groups associated with the WHS will be guided by previous assessment work undertaken in the WHS.

9.7.2 Identification of asset groups will take account of sites and monuments with no surface expression, including ploughed-down earthworks and sites represented by artefacts in the ploughzone. With regards to artefact scatters, their significance will be assessed as part of the ‘Associated Sites’ element of the WHS and in relation to their research potential, in line with, for example, the Research Framework for the Stonehenge, Avebury and Associated Sites WHS [47], and the contribution they can make to the attributes of OUV of the WHS. Both designated and non-designated assets will be considered in identifying groupings.

9.7.3 Grouping will take into account previously identified groups, in particular the asset groups identified during the Stonehenge Visitor Centre HIA, the Stonehenge and Avebury World Heritage Site Woodland Strategy, the Outline Assessments undertaken in relation to the A303 improvement by Historic England and the National Trust ([36] and [37]), and the assessments undertaken at the optioneering stage for the A303 Scheme.

9.7.4 The 2014 Preliminary Outline Assessment commissioned by English Heritage (now Historic England) and the National Trust [36] selected 17 key monument groups that convey attributes of OUV, including major barrow groups and Stonehenge itself, whose relationships would be affected by the visible presence or absence of the A303. The intention was that this approach would produce a preliminary but clear result representative of the outcome of a full HIA based on a more detailed scheme proposal. This approach was repeated in the 2017 Outline Assessment [37] with some modifications to reflect the results of archaeological survey work carried out after 2014. This method of assessing impacts is consistent with the ICOMOS Guidance [1]. A broadly similar approach will be taken in this HIA Scoping and in the full HIA.

9.7.5 The identification of the key groups expressing the seven attributes of OUV will reflect the results of recent archaeological survey work, walkover survey and topographical and geographical connections noted using GIS. The visual sensitivity model in the 2015 WHS Management Plan will be considered, together with the ZTV model and available visualisations for the Scheme to help identify relevant relationships.

9.7.6 The analysis of both the Neolithic and Bronze Age landscape, asset groups and individual monuments will assist in highlighting anomalies, including areas where physical remains have been removed by past agricultural practices. Where possible, group names in common use will be applied. In order to inform and provide context for the landscapes and identified asset groups, their significance and their contribution to the OUV of the WHS (where identified), this will include a
period summary of the Stonehenge landscape and information on the monument types.

9.7.7 Asset groups will be defined across the Stonehenge part of the World Heritage property. The assessment will be confined to those monument groups which are potentially affected by the scheme (physical or setting impacts). Assessment will take account of the present-day baseline (the ‘do-nothing scenario’), including the presence of the current A303 in the landscape.

9.7.8 A number of asset groups have been scoped out due to their distance from the Scheme (including diversionary/high load routes) and/or beyond the WHS boundary.

9.7.9 A number of asset groups inside the WHS boundary, but on its southern edge, have been scoped out of the HIA due to distance from the Proposed Scheme and intervening topography. Potential harmful impacts from the Proposed Scheme upon these asset groups have been screened out based on initial ZVI/ZTV modelling.

9.7.10 These include:

- the Wilsford Barrow Cemetery;
- the Lake Down Barrow Cemetery;
- the Rox Hill Barrow Cemetery; and
- the Lake House Barrow Cemetery.

9.7.11 Outside the WHS boundary to the east and the south east, those asset groups scoped out of the HIA, due to distance and lack of intervisibility with monuments that contribute to OUV within the WHS, include:

- the Earls Farm Down Barrow Cemetery;
- the Boscombe Down Airfield Barrow Cemetery;
- the Amesbury Down Barrow Cemetery; and
- the archaeological remains located at Archers Gate, Amesbury.

9.7.12 Outside the WHS boundary to the west, those asset groups scoped out of the HIA due to distance and lack of intervisibility with monuments that contribute to OUV within the WHS, include:

- the Winterbourne Stoke East round barrow cemetery and earthwork enclosure on Fore Down; and
- the Winterbourne Stoke West round barrow cemetery and The Coniger enclosure.
9.7.13 Larkhill Camp Longbarrow, the Larkhill Causewayed Enclosure and Bulford Barrows are scoped in to the HIA, as the high load/diversionary route passes close to these asset groups.

9.7.14 In addition to groups, the setting of isolated sites and discrete assets that convey the attributes of OUV will also be considered. These sites may be isolated geographically or thematically, such as the Wilsford Shaft. They may also comprise isolated barrows and burials. Archaeological features such as pit clusters and artefact scatters in the ploughzone will also be considered.

9.7.15 A preliminary list of proposed monument groups that convey attributes of the OUV of the WHS are listed below. It is important to note that these groups are subjective, and there are still major gaps in understanding of the chronological relationships between monuments, groups, and past landscapes.

- 1. Durrington Walls and Associated Sites;
- 2. Woodhenge and Associated Sites;
- 3. The Avenue;
- 4. The Avenue Barrows (including some barrows scheduled under Stonehenge and The Avenue);
- 5. The King Barrows (excluding outliers to west which are not part of the main ridge group);
- 6. Coneybury Henge and Coneybury Barrow (King Barrow) south of Coneybury Henge;
- 7. The Cursus;
- 8. The Cursus (East - long barrow situated at its eastern end and Cursus east end barrows);
- 9. The Cursus (West - two round barrows situated within its western end);
- 10. The Cursus Barrows;
- 11. Stonehenge and bell barrow adjacent to A303;
- 12. Stonehenge Down Barrows;
- 13. Normanton Down Barrows;
- 14. North Kite Enclosure and Lake Barrows;
- 15. Winterbourne Stoke Crossroads barrows;
- 16. The Diamond Barrows;
- 17. Stonehenge Bottom / Luxenborough Barrows;
18. Countess Farm Barrows;
19. Vespasian’s Camp Barrows;
20. Durrington Down Barrows;
21. Packway Barrows;
22. Rolleston Barrows;
23. The Lesser Cursus;
24. Lesser Cursus Barrows and timber post circle;
25. Winterbourne Stoke Down barrows;
26. Robin Hood’s Ball;
27. Larkhill Causewayed Enclosure;
28. Larkhill Camp long barrow;
29. Knighton Down long barrow;
30. Bulford Barrow Cemetery;
31. Net Down Barrow Cemetery; and
32. Winterbourne Stoke Hill group ring ditches.

**Heritage assets within the Study Area outside the WHS boundary**

9.7.16 Designated heritage assets outside the WHS boundary, which contribute to the OUV of the WHS, will also be identified.

9.7.17 Non-designated heritage assets of Bronze Age and Neolithic date within the Study Area, which contribute demonstrably to the OUV of the World Heritage Site, will be identified where possible from existing sources. Information on these assets will be compiled from the historic environment baseline as well as the Stonehenge, Avebury and Associated Sites World Heritage Site Research Frameworks [48] [49].

**9.8 Asset groups and attributes of OUV**

9.8.1 The assessment will aim to identify assets (both designated and non-designated), or asset groups, which convey the OUV of the Stonehenge, Avebury and Associated Sites World Heritage Site. This will consider the seven attributes of OUV of the Stonehenge and Avebury World Heritage Site identified in the 2015 WHS Management Plan [5].

9.8.2 Table 1 explores the key monument groups in relation to assessment of impacts on each of the attributes of OUV.
Table 1. Summary of approaches to assessment of Attributes of OUV

<table>
<thead>
<tr>
<th>Attributes of OUV</th>
<th>Approach to assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Stonehenge itself as a globally famous and iconic monument.</td>
<td>The HIA will consider the impacts of road construction and operation on the setting of Stonehenge. The assessment will explore the inherent iconic value of the monument, people’s experience of this and Scheme impacts upon its iconic value.</td>
</tr>
<tr>
<td>2. The physical remains of the Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to the landscape.</td>
<td>The HIA will consider physical impacts of road construction and operation on archaeological remains.</td>
</tr>
<tr>
<td>4. The design of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to the skies and astronomy.</td>
<td>The HIA will take into account solstice alignments, dark skies and archaeoastronomy aspects. The HIA will consider impacts on The Avenue, Stonehenge, Durrington Walls Avenue, the southern circle at Durrington Walls, Woodhenge and barrow groups on skylines such as Winterbourne Stoke, Normanton Down, the King Barrows and the Cursus barrows. The HIA will assess the impact on the ability to experience the alignments as designed as well as the night sky.</td>
</tr>
<tr>
<td>3. The siting of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to the landscape. 5. The siting of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to each other. 6. The disposition, physical remains and settings of the key Neolithic and Bronze Age funerary, ceremonial and other monuments and sites of the period, which together form a landscape without parallel.</td>
<td>The HIA will consider physical impacts of road construction and operation on archaeological remains. With regard to the impacts of road construction and operation on the setting of assets, the HIA will assess key groups which display attributes of OUV, taking account of both visual and physical relationships (e.g. movement which was clearly a factor in the relationship between monuments and monuments and the landscape), as well as noise, vibration, smell and ambience. The HIA will take into account whether the likely reason for the placement of monuments/groups in relation to the landscape/topographical features is obscured or lost, where such reasons are readily understood and not in dispute. The HIA will consider potential Scheme impacts on the legibility of the relationships between monuments/groups and the experience of them. The HIA will consider impacts on monuments that convey OUV which do not form part of asset groups. Impacts on isolated individual monuments which do not readily fit into wider monument groups will be included in consideration of impact on attributes of OUV. The HIA will assess the overall impact of the Proposed Scheme upon all the relationships set out across the whole landscape - the sum of all the relationships described in Attributes 2, 3 and 4.</td>
</tr>
<tr>
<td>7. the influence of the remains of Neolithic and Bronze Age funerary and ceremonial monuments and their landscape settings on architects, artists, historians, archaeologists and others</td>
<td>The HIA will consider impacts on Attribute 7 predominantly with reference to Stonehenge, but will also consider the wider landscape in which the monument is experienced. The HIA will consider key historical vistas, such as looking towards Stonehenge from King Barrow Ridge, a prospect from which Stonehenge was viewed by visitors to Amesbury Abbey park and which inspired several well-known historical portrayals of the ‘romantic ruins’.</td>
</tr>
</tbody>
</table>
Views drawn by Antiquaries, including Stukeley, and Philip Croker in Colt-Hoare’s Ancient Wiltshire. Additional research will be undertaken into artists and views, including both the picturesque views alluded to in the WHS Management Plan, and more recent works (e.g. Constable, Turner, Geller, Blake etc.).

The influence on architectural thought (e.g. Inigo Jones, John Wood, John Webb), Renaissance thought and the Jacobean revival will also be explored. Influences on early histories and national narratives will be investigated. The antiquarian contribution to the development of archaeological and scientific method will be considered. The place of the Stonehenge landscape in literature will be investigated, including poetry (Sidney, Spenser, Herbert, Drayton, Dryden, Blake, Wordsworth), novels (Hardy, Coventry Patmore, James, Forster, Thomas and Golding), philosophy (Edmund Burke) and diarists and travelogues (Pepys, Defoe, Hazlitt). Its contemporary cultural influences and significance will also be considered.

The HIA will consider how it influences people today and how it is valued locally now. It will also consider how people will experience and be influenced by the monument and the landscape once the road and tunnel are constructed.

9.9 Assessing Scheme impacts

Assessing impacts on attributes of OUV

9.9.1 A qualitative assessment of the impact of the route options on the attributes of the OUV, as defined in the 2015 Management Plan, will be prepared. An objective quantitative assessment will also be included. For each attribute a short description of the positive and negative impacts will be presented, with an overall summary conclusion reached on the impacts in relation to that attribute.

9.9.2 The HIA will:

a) Describe the discrete assets, groups of assets and the overall Stonehenge element of the WHS, characterising their condition, significance, interrelationships and sensitivity and contribution to attributes of OUV;

b) Describe the current setting of the assets, groups and the WHS, key features of their setting and how this contributes to their significance and the attributes of OUV;

c) Assess the assets, groups and the WHS in accordance with ICOMOS Guidance on Heritage Impact Assessments for Cultural World Heritage Properties [5, p. Appendix 3A];

d) Describe how the proposed development would alter the fabric (where relevant) and setting of the assets, groups and the WHS and affect their significance and the attributes of OUV;

e) Evaluate potential Scheme impacts upon assets and groups, rating the potential negative and positive impacts; and

f) Assess the resultant environmental effect [1, p. 9].
9.9.3 The HIA will present a qualitative assessment of the impact of the proposed development on the attributes of OUV identified above and in the 2015 Management Plan [5]. It will consider HIAs undertaken during the course of route selection, including the high-level HIA Iterations 1 [33] and 2 [34], the HIA undertaken for the Technical Appraisal Report [13]. It will also take note of the Outline HIAs commissioned by Historic England and the National Trust [36] and [37].

9.9.4 A quantitative assessment of impacts will also be undertaken based on the GIS, modelling and visualisations described above as a comparison and check. This will also draw on quantitative data from noise, pollution, traffic, tourism, LVIA and lighting studies.

9.9.5 The assessment of the impact of the Proposed Scheme will be undertaken on the attributes of OUV of the WHS. The impact assessment will identify the range of unmitigated impacts on individual heritage assets, or groups of assets, that contribute to the OUV.

9.9.6 The scale of impact will be scored and the significance of effect for each attribute will be established using the following table, derived from the ICOMOS HIA Guidance [1, p. 9].

Table 2. Significance of effect assessment matrix [1, p. 9]

<table>
<thead>
<tr>
<th>VALUE OF HERITAGE ASSET</th>
<th>SCALE &amp; SEVERITY OF CHANGE/IMPACT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No Change</td>
</tr>
<tr>
<td>For WH properties Very High – attributes which convey OUV</td>
<td><strong>SIGNIFICANCE OF EFFECT OR OVERALL IMPACT (EITHER ADVERSE OR BENEFICIAL)</strong></td>
</tr>
</tbody>
</table>

9.9.7 Mitigation proposals will be put forward and the resultant significance of effect, following mitigation, will also be rated.

9.9.8 For each individual attributes a narrative description of the positive and negative impacts will be presented, with a summary conclusion on the overall impact of the Scheme in relation to that individual attribute of OUV. This will describe how the proposed development would affect the attribute citing evidence for conclusions.

9.9.9 It should be noted that in many cases impacts on individual assets, groups of assets, or attributes can potentially be multiple, from different construction activities or the result of different elements of the Scheme’s operation. Impacts can be both adverse and beneficial. The HIA will describe the impacts in detail and any mitigation measures proposed.

**Assessment of impacts on authenticity and integrity**

9.9.10 The potential impact of the Proposed Scheme on the integrity and authenticity of the WHS will be described in a narrative manner.
Paragraph 82 of the 2016 Operational Guidelines for the Implementation of the World Heritage Convention [25], provides guidance on the types of factors that can usefully be considered when addressing the authenticity of a WHS. This states that:

> Depending on the type of cultural heritage, and its cultural context, properties may be understood to meet the conditions of authenticity if their cultural values (as recognized in the nomination criteria) are truthfully and credibly expressed through a variety of attributes including:

- **Form and design**;
- **Materials and substance**;
- **Use and function**;
- **Traditions, techniques and management systems**;
- **Location and setting**;
- **Language, and other forms of intangible heritage**;
- **Spirit and feeling**; and
- **Other internal and external factors**.

In relation to the Stonehenge, Avebury and Associated Sites WHS, the primary factors that express its authenticity overlap with the attributes of OUV. These factors are considered to relate to:

a) **Form and design** – the form and design of monuments and the interrelationships between monuments;

b) **Materials and substance** – the materials used to construct monuments and the continuing conservation of those materials; and

c) **Location and setting** – the relationships between monuments and the landscape and the celestial/ astronomical arrangements.

In relation to Integrity, the Operational Guidelines [25] state in paragraphs 88 and 89 that:

88. Integrity is a measure of the wholeness and intactness of the natural and/or cultural heritage and its attributes. Examining the conditions of integrity, therefore requires assessing the extent to which the property:

- **Includes all elements necessary to express its Outstanding Universal Value**;
- **Is of adequate size to ensure the complete representation of the features and processes which convey the property’s significance**;
- **Suffers from adverse effects of development and/or neglect**;
- **This should be presented in a statement of integrity**.

89. For properties nominated under criteria (i) to (vi)⁴, the physical fabric of the property and/or its significant features should be in good condition, and the impact of deterioration processes controlled. A significant proportion of the elements necessary to convey the totality of the value conveyed by the

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⁴ Paragraph 89 applies as the WHS was inscribed under Criteria (i), (ii) and (iii).
property should be included. Relationships and dynamic functions present in cultural landscapes, historic towns or other living properties essential to their distinctive character should also be maintained.

9.9.14 These factors will be taken into account when assessing the potential impact on the integrity of the WHS.

9.9.15 The HIA will consider the overall impacts and effects of the Scheme as a whole on the OUV of the WHS, including its attributes, authenticity and integrity. The HIA will consider impacts through the full lifecycle of the Proposed Scheme and will come to an overall conclusion regarding both the adverse and beneficial effects of the Scheme on the OUV of the whole WH Property.

9.10 HIA report structure

9.10.1 The HIA report will include:

a) The proper name of the WH property;
b) Its geographical coordinates;
c) The date of inscription;
d) The date of the HIA report;
e) The name of the organization or entities responsible for preparing the HIA report;
f) For whom it was prepared; and

g) A statement on whether the report has been externally assessed or peer-reviewed.

9.10.2 The structure of the HIA report will follow that set out in Guidance on Heritage Impact Assessments for Cultural World Heritage Properties [1, p. Appendix 4]:

1 Non-technical summary
2 Introduction
3 Methodology
4 Site history and description, including OUV
5 Description of the Proposed Scheme
6 Mitigation Measures incorporated into the Proposed Scheme
7 Assessment and evaluation of impact of the Proposed Scheme
8 Further potential mitigation measures
9 Conclusions
10 Bibliography
11 Glossary of terms used
12 Illustrations and plans
13 Appendices
9.11 Assessment assumptions and limitations

HIA Scoping Report

9.11.1 The monument groupings, viewpoints and assets outside the WHS which convey attributes of OUV, which are to be considered in the HIA, are as defined and agreed with HMAG and the Scientific Committee in this HIA Scoping Report. The HIA may bring in additional monument groupings, viewpoints and assets to the HIA as the assessment is undertaken – these will be further agreed with HMAG and the Scientific Committee in ongoing meetings and consultation.

HIA Report

9.11.2 The HIA will include a statement regarding the degree of confidence in the results. It will also describe any technical difficulties encountered, knowledge gaps and uncertainties and how these will be addressed.

9.11.3 Where mitigation proposals have been confirmed and agreed with HMAG, the potential impacts will be reported, and residual effects identified after mitigation has been taken into account. The results of previous and ongoing archaeological evaluations will be detailed in the historic environment baseline, which will form part of the EIA. The EIA will contain information on outline mitigation measures. It is anticipated that an Archaeological Mitigation Strategy and Overarching Written Scheme of Investigation (WSI) will be prepared to direct the overall Scheme archaeological mitigation programme; detailed site-specific WSIs will be prepared for individual interventions. These WSIs would all be confirmed and agreed with HMAG.

9.11.4 If the design is sufficiently detailed and the significance of the heritage assets is understood enough to establish the impact, but mitigation proposals are not confirmed and agreed, then the magnitude of impact assessment will discount them, and report the impact as it would be for the Scheme without mitigation. In this way, as mitigation proposals are confirmed and agreed, their effect will be reflected in amendments to the magnitude of impact assessments, thereby contributing to a realistic record of the predicted effects of the proposals as they stand at the time of the assessment.

9.11.5 If Scheme proposals are insufficiently detailed for impacts to be identified confidently, this will be acknowledged. If the presence, significance, location, state of preservation etc. of assets is unknown or incompletely understood (for the purposes of the assessment) then again, this will be noted. Although it may not be possible to predict the magnitude of the impact of the finished Scheme if these factors are unknown, the risk they represent will be identified.

10 Likely sensitive receptors related to attributes of OUV

10.1.1 The HIA report will be undertaken in close coordination with the drafting of the historic environment baseline assessment and the Environmental Impact Assessment, which will identify any data gaps and indicate further data gathering and/or field survey requirements.

10.1.2 In particular, the historic environment baseline will identify and describe the significance of the heritage assets with particular reference to visual and
topographical relationships, physical, conceptual and contextual links, and the ways in which these articulate or convey the attributes of the Outstanding Universal Value (OUV) of the World Heritage Site. These will involve the principal monument groups intervisible with the Scheme including Stonehenge itself.

Attribute 1: Stonehenge itself as a globally famous and iconic monument.

**Monument Group: Stonehenge**

10.1.3 The dominance of traffic around Stonehenge has long been recognised as an issue for the WHS. The heavy traffic on the A303 has a major adverse visual and aural impact on the monument. It detracts from the visitor experience and distracts visitors. The current A303 affects views of the Stonehenge monument and views, physical and contextual links, from the monument towards its wider landscape.

10.1.4 It is anticipated that the removal of the current A303 would remove this impact. Removing the visual and aural presence of traffic from Stonehenge and its immediate environs has the potential to enhance the setting and appreciation of this critically important monument.

10.1.5 The ‘do-nothing’ scenario and the impact of the Proposed Scheme on Stonehenge will be fully assessed in the HIA and addressed in the design and mitigation measures as the Scheme develops. The loss of the ‘free’ view of the Stones from vehicles travelling along the current A303 (noting that there will be no change to ‘free’ views of the Stones from the inalienable National Trust land surrounding the Stones that is currently, and will remain, permissive open access, and no loss of the free view from the new greenway) will also be assessed and explored as the design develops and ways to compensate explored.

Attribute 2: The physical remains of the Neolithic and Bronze Age funerary and ceremonial monuments and associated sites.

**Monument Groups: Winterbourne Stoke West Barrows; Winterbourne Stoke East Barrows and Enclosure; Cursus Barrows (West); The Greater Cursus; Normanton Down Barrows; The Avenue; King Barrows; Stonehenge Bottom/ Luxenborough Barrows; Coneybury Henge and associated monuments; Countess Farm Barrows; Diamond Barrow Group; Winterbourne Stoke Crossroads Barrows; Avenue Barrows**

**Monuments outside of groups which also convey this attribute of OUV**

10.1.6 The current A303 impacts upon the setting of all monuments from which it is visible and audible and the WH property as a whole. The removal of the existing road would reduce physical and contextual severance and visual impacts on a number of receptors. It would allow the reconnection of the Avenue, where it is severed by the existing A303, and restore physical connectivity along much of the length of this important prehistoric ceremonial route. It is anticipated that removing the severance on the King Barrow Ridge would enable the reconnection of the King Barrows with other monuments and the landscape to the south.

10.1.7 However, the construction and operation of the new road and tunnel infrastructure in the WHS and its environs could result in adverse impacts on the fabric and
setting of archaeological monuments and remains that contribute to the OUV of the WHS, if not designed in a sensitive manner. In order to limit the visual intrusion of moving or static traffic, or road infrastructure within the WHS, elements of the Scheme will be placed in cutting and tunnel portal mouths will be designed to be minimally intrusive in views from monuments such as the Winterbourne Stoke Crossroads barrow cemetery. In terms of physical impacts, the construction of the lengths of highway within the WHS may also result in the removal of known and currently unknown archaeological remains. Archaeological evaluations are proposed in order to understand this and provide evidence for the HIA and EIA. **It is anticipated that outside the WHS there would be some loss of archaeological remains associated with key periods represented in the WHS. The route may also affect the settings of designated and non-designated archaeological monuments within and outside of the WHS.**

**Attribute 3. The siting of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to the landscape.**

10.1.8 This is discussed below (see Attribute 6 and paragraphs 10.1.11 – 10.1.14).

**Attribute 4. The design of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to the skies and astronomy.**

**Monument Group: Stonehenge**

10.1.9 Although a number of sites within the World Heritage property are aligned on the midsummer sunrise and midwinter sunset axis, the only one currently impacted by the existing A303 is the midsummer sunrise/ midwinter sunset solstice axis at Stonehenge itself. The lights of traffic along the present A303 adversely affect the ability to observe the midwinter sunset.

10.1.10 It is anticipated that the removal of the current A303, the design of the western tunnel portal of the tunnel to avoid alignment with the solstitial axis, design to reduce light pollution with the use of cuttings, canopies and green bridges for the Scheme may provide positive changes to this part of the WHS by reducing the visual intrusion of the existing road, whilst acknowledging that the cutting would impact the WHS’s integrity.

**Attribute 3. The siting of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to the landscape.**

**Attribute 5. The siting of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to each other.**

**Attribute 6. The disposition, physical remains and settings of the key Neolithic and Bronze Age funerary, ceremonial and other monuments and sites of the period, which together form a landscape without parallel.**

**The World Heritage property from King Barrow Ridge and Coneybury Hill around Stonehenge itself as far west as Normanton Gorse; Winterbourne Stoke Crossroads Barrows, the Normanton Down Barrows, Lake Barrow Group and North Kite, and the Diamond Barrows**
10.1.11 These attributes concern the visual and topographical relationships of physical attributes within the World Heritage property. The siting and visibility of the present A303 currently affects the ability to understand and appreciate the relationship of monuments to the surrounding landscape and the way in which these monuments form a landscape without parallel. The road interferes visually with relationships between monuments which are themselves attributes of OUV.

10.1.12 It is anticipated that removing the current A303 would have beneficial impacts, removing the visual presence of traffic from views across the defined topographic bowl around Stonehenge and between monuments within and on the edge of that area. This includes views from individual barrows and barrow groups around the edge of the area towards Stonehenge, in which traffic features in the foreground and backdrop – these visual relationships are an important element of the setting and significance of the barrows. Greening the current A303 would remove severance of physical relationships between a number of monument groups and individual monuments.

10.1.13 In particular, the Scheme would reduce road infrastructure and traffic passing close to the Winterbourne Stoke Crossroads barrow cemetery on the western edge of the WHS (Longbarrow).

10.1.14 The construction of the Proposed Scheme in cutting, within the western portion of the WHS would introduce additional adverse impacts. The design of the western approach, however, may incorporate elements including the possible use of a canopy and a green bridge, to act as concealing devices for the western tunnel portal and long views out of the WHS to the new Longbarrow Junction. The green bridge at the A360 will also ensure continued north-south connectivity along a public right of way, providing the ability for visitors to access the monuments and experience the link between the Winterbourne Stoke Crossroads barrow group and the Diamond group. Shallow grass slopes in the upper portion of the retained cutting will enable the upper portion of the cutting to be concealed and allow it to blend into the surrounding landscape from many key viewpoints, important to the understanding of the OUV, within the WHS.

Attribute 7. The influence of the remains of Neolithic and Bronze Age funerary and ceremonial monuments and their landscape settings on architects, artists, historians, archaeologists and others.

Specific viewpoints of Stonehenge from particular points in the landscape

10.1.15 Stonehenge in particular has been the subject of numerous artists, including J M W Turner, and figures in many books, both fiction such as Tess of the D’Urbervilles and academic works. It has also inspired many architects from Inigo Jones onwards and has been the subject of antiquarian and archaeological study and speculation for more than three hundred years.

10.1.16 The present A303 is highly visible in many views in the landscape and deters artistic appreciation. On the other hand, the view of Stonehenge from vehicles descending from King Barrow Ridge to Stonehenge Bottom is highly appreciated.
by many; although this view would no longer be available to motorists, visitors would still appreciate it on foot or by using one of the byways that run close to it.

10.1.17 Overall, the existing A303 has an adverse effect on this attribute. Removing the A303 from the key views which have inspired artists and others over centuries, including present-day visitors and those for whom the property has spiritual associations, would be a beneficial change.

Integrity

10.1.18 The current A303 has visual, aural and access impacts on the integrity of the World Heritage property and results in the severance of physical relationships. The existing A303 has an adverse impact on the integrity of the World Heritage property.

10.1.19 It is anticipated that the removal of the current A303 would address a longstanding impact on the integrity of the WHS and would provide benefits for the integrity of the site. Removing significant lengths of the existing A303 would improve the ability to access more parts of the World Heritage property (particularly to the south of the A303) and would reduce aural and visual impact where the road would be in a tunnel, which would be a beneficial change. Benefits would include:

a) The reconnection of the Avenue, where it is severed by the current A303, which would enhance the integrity of an important monument;

b) The reconnection of the north and south parts of the WHS creating a more complete landscape that better represents the cultural heritage value of the WHS and enables visitors to fully engage with and explore key areas of the WHS south of the current A303 using public rights of way;

c) The removal of extensive visual and aural intrusion from road traffic and associated infrastructure across many parts of the WHS including around Stonehenge itself;

d) The removal of severance from the King Barrow Ridge and the associated barrow groups; and

e) The removal of traffic from immediately adjacent to Winterbourne Stoke Crossroads barrow cemetery.

10.1.20 It is acknowledged that the introduction of a BOAT between Byways 11 and 12 as part of the Scheme would need to be assessed as to its negative impact as part of the HIA, wherever this is positioned in the WHS landscape.

10.1.21 Where the road is not in a tunnel, there would be stretches of new dual carriageway, much of which will be in a retained cutting, with the western tunnel portal concealed using a canopy extension to the bored tunnel. The construction of the cuttings and the tunnel portals would have an adverse impact on the integrity of the World Heritage property. Although their locations have been designed to avoid impacts on known archaeological remains where possible, intrusive archaeological evaluation and mitigation works may reveal presently unknown archaeological deposits. The development of new areas of dual carriageway and tunnel portals, particularly in the western approach section, would degrade the integrity of the Site by:
a) Severing physical relationships between important monument groups such as the Winterbourne Stoke Crossroads Barrow group and the Diamond group; and

b) Severing the landscape in this area, dividing a notably dry river valley east of the current A360.

The removal of the current A303 would bring benefits for the integrity of the World Heritage property including key monuments such as Stonehenge and the Avenue.

**Authenticity**

10.1.23 In terms of the **form and design** of monuments and the interrelationships between those monuments: the proposed route avoids physical impacts on major monuments associated with the OUV of the WHS. It would have a mixture of positive and negative impacts on the designed relationships between monuments; it would therefore both strengthen and degrade this aspect of authenticity.

10.1.24 The impact of the road on the **materials** used to construct monuments and the continuing conservation of those materials is assessed to be relatively limited. The road is currently a dominant feature in many views of the World Heritage property with an adverse impact on the setting of the property. Both its visual and aural impact is disruptive to the sense of place of the property. No landscaped earthworks are proposed within the WHS that could affect the perceived authenticity of the landform, such as earthwork bunds or false cuttings.

10.1.25 The **location and setting** of the WHS includes the many and varied relationships between monuments, and between monuments and the landscape and the celestial alignments. There is a distinct mix of positive and negative impacts upon the attributes of OUV, with the potential for areas of the WHS seeing a marked improvement in the experience and display of these aspects of authenticity, and others experiencing a negative impact.

10.1.26 Overall, the existing A303 has a major adverse effect on the authenticity of the property. It is anticipated that the Proposed Scheme would result in a range of positive and negative impacts on the OUV of the WHS.

**11 Design, mitigation and enhancement measures**

11.1.1 The HIA will set out outline potential design, mitigation and enhancement measures that could be implemented to reduce any adverse effects.

11.1.2 Mitigation comprises any measures which are incorporated into the design or implementation of the Proposed Scheme for the purpose of avoiding, preventing, minimising and reducing adverse environmental impacts. Mitigation may also include measures to create environmental benefits.

11.1.3 Mitigation measures under consideration include:

**Avoiding impacts**

a) Careful consideration of horizontal and vertical alignments, setting aspects and sympathetic design, such as use of canopy / green bridge and cuttings;
b) Careful siting and design of tunnel portals to minimise impacts upon cultural heritage where feasible;
c) Minimising land-take, particularly in sensitive areas;
d) Deposit modelling, preservation *in situ* and monitoring;
e) Quiet running pavements;
f) Protection measures, defining the extent of protected areas with ground markers during works and establishing exclusion zones; and
g) Community engagement.

*Preventing, minimising and reducing impacts*

a) Reducing compaction with protective and geotextile matting, Low Ground Pressure (LGP) plant, tracked equipment;
b) Implementing machinery exclusion zones;
c) Managing ground conditions and control of construction traffic movements;
d) Maintaining and monitoring existing hydrological regimes; and
e) Maintaining access, enabling appreciation and raising awareness.

*Archaeological investigation and recording*

a) Archaeological investigation and recording in advance of and during construction;
b) Geo-archaeological investigation and recording in advance of and/or during construction;
c) Conservation and repair of historic structures and relocation either within or outside the Proposed Scheme boundary in a suitable location;
d) Historic landscape survey, excavation and recording prior to construction; and
e) Documentation, including funded analysis, publication and dissemination of Scheme-related fieldwork and research results.

*Enhancement*

a) Enhancing access, amenity, interpretation and presentation;
b) Conservation and repair;
c) Removing existing intrusions and ‘greening’ the detrunked sections of the existing A303 and A360;
d) Supporting heritage programmes, projects and activities, such as public presentation (particularly for local schools and local amateur archaeological or historical groups or societies);
e) Providing information to inform local communities, visitors and the academic community of the progress of archaeological works;
f) Enhancement of historic views and the setting of monuments, including opening features to view; and
g) Cumulative natural and cultural benefits of increased biodiversity, such as bringing skylarks back to the Stonehenge landscape and further encouraging stone curlews.
11.1.4 Mitigation measures applicable to the Proposed Scheme have yet to be determined in detail. All archaeological investigations will be undertaken in accordance with relevant archaeological research strategies and in line with a scheme wide archaeological mitigation strategy and archaeological fieldwork specifications approved by HMAG.

11.1.5 The report will describe the design-based mitigation measures that have been incorporated into the Proposed Scheme to address negative impacts and deliver improved beneficial impacts. It will also describe additional mitigation measures that could be incorporated into the construction and operation phases.

11.1.6 The HIA will indicate predicted residual impacts following mitigation.

12 Assessment of cumulative effects

12.1 Cumulative assessment methodology

12.1.1 Cumulative impacts can arise from multiple effects of the same scheme, multiple effects of other schemes, or incremental effects arising from a number of actions over time, on a heritage asset or asset group. Interactions may arise from activities related to other topics, such as drainage, endangered species relocation, sound attenuation measures or access arrangements, taken together with any cultural heritage impacts.

12.1.2 The HIA will assess the potential for cumulative impacts on the attributes of the OUV of the WHS of developments including:

a) Kings Gate, Amesbury: New strategic housing allocation - 1,300 dwellings to be provided within the Core Strategy period (to 2026), a proportion of which have already been the subject of planning applications, located off the A345 just to the south of Amesbury;

b) Various Core Strategy development allocations to the north and east of Salisbury which are linked to the A303 via the A360 and A345, including the Fugglestone Red mixed-use development alongside the A360 (1,250 dwellings and 8ha employment land) and the Longhedge mixed-use development alongside the A345 (450 dwellings and 8ha employment land);

c) The operation of the Stonehenge Visitor Centre, including consideration of traffic, visitor impacts, infrastructure and lighting;

d) Army Rebasing Programme: Larkhill and Bulford;

e) Boeing Development at Boscombe Down;

f) Solstice Park, Amesbury;

gh) Winterbourne Stoke bypass; and

h) Increased or altered footfall patterns in parts of the WHS, beyond the Stonehenge monument, due to the removal of A303 severance. Alterations to public access, visitor numbers and footfall, and locations subject to increased human presence, footfall erosion and potential interference as an indirect
result of removing the A303 barrier between the Stonehenge monument and the wider WHS landscape. Potential cumulative impacts upon the Avebury element of the WHS where appropriate.

12.2 Assessment of combined effects

12.2.1 The combined effect of individual impacts occurs when a receptor is affected by more than one impact during any phase of a development.

12.2.2 Only impact interactions for the anticipated residual impacts of the development will be considered. The residual impacts will be listed against the sensitive receptors. All negligible impacts will be excluded from assessment. Only the minor, moderate and major adverse or beneficial impacts will be included. It is anticipated that the construction phase of the Proposed Scheme will have the greatest influence to contribute to impact interactions. Combined effects may include:

a) Construction phase lighting;

b) Changes in traffic flows due to diversions. Although the scheme is designed to allow the existing A303 to remain open and fully functional as possible during the construction of the new road, there will be some occasions when traffic has to be diverted elsewhere e.g. onto the Packway in the north part of the WHS; and

c) High load routes and tunnel diversion routes may also involve land take and/or the improvement of existing roads.
13 References


Abbreviations

AONB Area of Outstanding Natural Beauty
CSR Client Scheme Requirement
DCO Development Consent Order
DCMS Department for Culture Media and Sport
DfT Department for Transport
DMRB Design Manual for Roads and Bridges
EIA Environmental Impact Assessment
ES Environmental Statement
GIS Geographical Information Systems
HIA Heritage Impact Assessment
HMAG A303 Heritage Management and Advisory Group
IAN Interim Advice Note
ICOMOS International Council on Monuments and Sites
LiDAR Light Detection and Ranging
NHLE National Heritage List (England)
NMP National Mapping Programme
NMU Non-Motorised Users
NSIP Nationally Significant Infrastructure Project
NT National Trust
OUV Outstanding Universal Value
PEIR Preliminary Environmental Information Report
PCF Project Control Framework
PRA Preferred Route Alignment
PRoW Public Right of Way
SAC Special Area of Conservation
SOBC Strategic Outline Business Case
SoCC Statement of Community Consultation
SoOUV Statement of Outstanding Universal Value
SSSI Site of Special Scientific Interest
TAR Technical Appraisal Report
TBM Tunnel Boring Machine
UNESCO United Nations Educational, Scientific and Cultural Organization
VEMV Visual Envelope Map
WCAS Wiltshire Council Archaeology Service
WCS Wiltshire Core Strategy
WebTAG Web-based Transport Analysis Guidance
WHS World Heritage Site
WSHER Wiltshire and Swindon Historic Environment Record
ZTV Zone of Theoretical Visibility
ZVI Zones of Visual Influence
Glossary

Attribute/ Attributes of Outstanding Universal Value Attributes are a direct tangible expression of the OUV of the property. At Stonehenge & Avebury, all these attributes are ultimately derived from the 2008 Statement of Significance and the nomination and evaluation documentation of 1985/6. Taken together the attributes define the reasons for the OUV of the Stonehenge and Avebury WHS.

Authenticity The ability to understand the value attributed to the heritage depends on the degree to which information sources about this value may be understood as credible or truthful. Knowledge and understanding of these sources of information, in relation to original and subsequent characteristics of the cultural heritage, and their meaning, are the requisite bases for assessing all aspects of authenticity.

Conservation Area An area of special environmental or historic interest or importance, of which the character or appearance is protected (Section 69 of the Planning (Listed Buildings and Conservation Areas) Act 1990).

Department for Transport Government department responsible for the transport network in England, and for aspects of the transport network in the devolved administrations.

Design Manual for Roads and Bridges A series of 15 volumes that provide standards, advice notes and other published documents relating to the design, assessment and operation of trunk roads, including motorways in the United Kingdom, and, with some amendments, the Republic of Ireland.

Development Consent Order The means of applying for consent to undertake a Nationally Significant Infrastructure Project (NSIP). NSIPs include, for example, major energy and transport projects.

English Heritage Charity that cares for the National Heritage Collection of state-owned historic sites and monuments across England, under licence from Historic England.

Expressway / Expressway Standard A road with high quality performance and safety standards, as described in the July 2013 Action for Roads report.

Historic England Publicly funded body that champions and protects England’s historic places, including Stonehenge and Avebury; also known as the Historic Buildings and Monuments Commission for England.

Integrity Integrity is a measure of the wholeness and intactness of the natural and/or cultural heritage and its attributes. Examining the conditions of integrity, therefore requires assessing the extent to which the property: a) includes all elements necessary to express its outstanding universal value; b) is of adequate size to ensure the complete representation of the features and processes which convey the property’s significance; c) suffers from adverse effects of development and/or neglect.

National Trust Charity that cares for historic houses, gardens, ancient monuments, countryside and other sites across England, Wales and Northern Ireland, including parts of the Stonehenge landscape.

Outstanding Universal Value Outstanding Universal Value means cultural and/or natural significance which is so exceptional as to transcend national boundaries and to be of common importance for present and future generations of humanity. To be deemed of Outstanding Universal Value, a property must also meet the conditions of integrity and/or
authenticity and must have an adequate protection and management system to ensure its safeguarding.

**Project Control Framework** A joint Department for Transport and Highways England approach to managing major projects. The Framework comprises a standard project lifecycle; standard project deliverables; project control processes and governance arrangements.

**Scheduled monument** A 'nationally important' archaeological site or historic building, given protection against unauthorised change and included in the Schedule of Monuments kept by the Secretary of State for Culture, Media and Sport. The protection given to scheduled monuments is given under the Ancient Monuments and Archaeological Areas Act 1979.

**Statement of Outstanding Universal Value** To be included on the UNESCO World Heritage List, sites must be deemed to be of ‘outstanding universal value’. OUV is 'cultural and/or natural significance which is so exceptional as to transcend national boundaries and to be of common importance for present and future generations of all humanity’. The Statement of Outstanding Universal Value shall be the basis for the future protection and management of the property.

**World Heritage Convention** The 1972 UNESCO Convention Concerning the Protection of the world Cultural and Natural Heritage provides for the identification, protection, presentation and transmission to future generations of cultural and natural heritage around the world considered to be of outstanding universal value

**World Heritage Site** A site inscribed by UNESCO because of its Outstanding Universal Value under the terms of the UNESCO World Heritage Convention.
Appendices
Appendix A – Retrospective Statement of Outstanding Universal Value (SoOUV), 2013
World Heritage

37 COM

WHC-13/37.COM/8E

Paris, 17 May 2013
Original: English / French

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

CONVENTION CONCERNING THE PROTECTION OF THE WORLD CULTURAL AND NATURAL HERITAGE

WORLD HERITAGE COMMITTEE

Thirty-seventh session

Phnom Penh, Cambodia
16 – 27 June 2013

Item 8 of the Provisional Agenda: Establishment of the World Heritage List and of the List of World Heritage in Danger

8E: Adoption of retrospective Statements of Outstanding Universal Value

SUMMARY

This Document presents the Draft Decision concerning the adoption of one hundred ninety-six retrospective Statements of Outstanding Universal Value submitted by fifty-eight States Parties for properties which had no Statement approved at the time of their inscription on the World Heritage List.

Due to the large number of Statements (totalling nearly 900 pages for translation), these Statements are reproduced in the Annex in the original language they were submitted by the State Party concerned. Some translations have commenced and the Statements will be finalized and uploaded after the 37th session of the World Heritage Committee, subject to availability of funds.

The annex contains the full text of the retrospective Statements of Outstanding Universal Value concerned in the original language submitted.

Draft Decision: 37 COM 8E, see Point II.
Brief synthesis

The World Heritage property Stonehenge, Avebury and Associated Sites is internationally important for its complexes of outstanding prehistoric monuments. Stonehenge is the most architecturally sophisticated prehistoric stone circle in the world, while Avebury is the largest. Together with inter-related monuments, and their associated landscapes, they demonstrate Neolithic and Bronze Age ceremonial and mortuary practices resulting from around 2000 years of continuous use and monument building between circa 3700 and 1500 BC. As such they represent a unique embodiment of our collective heritage.

The World Heritage property comprises two areas of Chalkland in southern Britain within which complexes of Neolithic and Bronze Age ceremonial and funerary monuments and associated sites were built. Each area contains a focal stone circle and henge and many other major monuments. At Stonehenge these include the Avenue, the Cursuses, Durrington Walls, Woodhenge, and the densest concentration of burial mounds in Britain. At Avebury they include Windmill Hill, the West Kennet Long Barrow, the Sanctuary, Silbury Hill, the West Kennet and Beckhampton Avenues, the West Kennet Palisaded Enclosures, and important barrows.

Stonehenge is one of the most impressive prehistoric megalithic monuments in the world on account of the sheer size of its megaliths, the sophistication of its concentric plan and architectural design, the shaping of the stones - uniquely using both Wiltshire Sarsen sandstone and Pembrokeshire Bluestone - and the precision with which it was built.

At Avebury, the massive Henge, containing the largest prehistoric stone circle in the world, and Silbury Hill, the largest prehistoric mound in Europe, demonstrate the outstanding engineering skills which were used to create masterpieces of earthen and megalithic architecture.

There is an exceptional survival of prehistoric monuments and sites within the World Heritage property including settlements, burial grounds, and large constructions of earth and stone. Today, together with their settings, they form landscapes without parallel. These complexes would have been of major significance to those who created them, as is apparent by the huge investment of time and effort they represent. They provide an insight into the mortuary and ceremonial practices of the period, and are evidence of prehistoric technology, architecture and astronomy. The careful siting of monuments in relation to the landscape helps us to further understand the Neolithic and Bronze Age.

Criterion (i): The monuments of the Stonehenge, Avebury and Associated Sites demonstrate outstanding
creative and technological achievements in prehistoric times.

Stonehenge is the most architecturally sophisticated prehistoric stone circle in the world. It is unrivalled in its design and unique engineering, featuring huge horizontal stone lintels capping the outer circle and the trilithons, locked together by carefully shaped joints. It is distinguished by the unique use of two different kinds of stones (Bluestones and Sarsens); their size (the largest weighing over 40 t) and the distance they were transported (up to 240 km). The sheer scale of some of the surrounding monuments is also remarkable; the Stonehenge Cursus and the Avenue are both about 3 km long, while Durrington Walls is the largest known henge in Britain, around 500 m in diameter, demonstrating the ability of prehistoric peoples to conceive, design and construct features of great size and complexity.

Avebury prehistoric stone circle is the largest in the world. The enclosing henge consists of a huge bank and ditch 1.3 km in circumference, within which 180 local, unshaped standing stones formed the large outer and two smaller inner circles. Leading from two of its four entrances, the West Kennet and Beckhampton Avenues of parallel standing stones still connect it with other monuments in the landscape. Another outstanding monument, Silbury Hill, is the largest prehistoric mound in Europe. Built around 2400 BC, it stands 39.6 m high and comprises half a million tonnes of chalk. The purpose of this imposing, skilfully engineered monument remains obscure.

Criterion (iii): The World Heritage property provides an outstanding illustration of the evolution of monument construction and of the continual use and shaping of the landscape over more than 2000 years, from the early Neolithic to the Bronze Age. The monuments and landscape have had an unwaivering influence on architects, artists, historians and archaeologists, and still retain a huge potential for future research.

The megalithic and earthen monuments of the World Heritage property demonstrate the shaping of the landscape through monument building for around 2000 years from circa 3700 BC, reflecting the importance and wide influence of both areas.

Since the 12th century when Stonehenge was considered one of the wonders of the world by the chroniclers Henry de Huntingdon and Geoffrey de Monmouth, the Stonehenge and Avebury Sites have excited curiosity and been the subject of study and speculation. Since early investigations by John Aubrey (1626-1697), Inigo Jones (1573-1652), and William Stukely (1687-1785), they have had an unwaivering influence on architects, archaeologists, artists and historians. The two parts of the World Heritage property provide an excellent opportunity for further research.

Today, the property has spiritual associations for some.

Criterion (iii): The complexes of monuments at Stonehenge and Avebury provide an exceptional insight into the funerary and ceremonial practices in Britain in the Neolithic and Bronze Age. Together with their associated sites, they form landscapes without parallel.

The design, position and interrelationship of the monuments and sites are evidence of a wealthy and highly organised prehistoric society able to impose its concepts on the environment. An outstanding example is the alignment of the Stonehenge Avenue (probably a procession route) and Stonehenge stone circle on the axis of the midsummer sunrise and midwinter sunset, indicating their ceremonial and astronomical character. At Avebury the length and size of some of the features such as the West Kennet Avenue, which connects the Henge to the Sanctuary over 2 km away, are further evidence of this.

A profound insight into the changing mortuary culture of the periods is provided by the use of Stonehenge as a cremation cemetery, by the West Kennet Long Barrow, the largest known Neolithic stone-chambered collective tomb in southern England, and by the hundreds of other burial sites illustrating evolving funerary rites.

Integrity

The boundaries of the property capture the attributes that together convey Outstanding Universal Value at Stonehenge and Avebury. They contain the major Neolithic and Bronze Age monuments that exemplify the creative genius and technological skills for which the property is inscribed. The Avebury and Stonehenge landscapes are extensive, both being around 25 square kilometres, and capture the relationship between the monuments as well as their landscape setting.

At Avebury the boundary was extended in 2008 to include East Kennet Long Barrow and Wyfold Down with its extensive Bronze Age field system and naturally occurring Sarsen Stones. At Stonehenge the boundary will be reviewed to consider the possible inclusion of related, significant monuments nearby such as Robin Hood’s Ball, a Neolithic causewayed enclosure.

The setting of some key monuments extends beyond the boundary. Provision of buffer zones or planning guidance based on a comprehensive setting study should be considered to protect the setting of both individual monuments and the overall setting of the property.

The survival of the Neolithic and Bronze Age monuments at both Stonehenge and Avebury is exceptional and remarkable given their age – they were built and used between around 3700 and 1600 BC. Stone and earth monuments retain their original design and materials. The timber structures have disappeared but postholes indicate their location. Monuments have been regularly maintained and repaired as necessary.

The presence of busy main roads going through the World Heritage property impacts adversely on its integrity. The roads sever the relationship between Stonehenge and its surrounding monuments, notably the A344 which separates the Stone Circle from the Avenue. At Avebury, roads cut through some key monuments including the Henge and the West Kennet Avenue. The A4 separates the Sanctuary from its barrow group at Overton Hill.

Adoption of retrospective Statements of Outstanding Universal Value
Roads and vehicles also cause damage to the fabric of some monuments while traffic noise and visual intrusion have a negative impact on their settings. The incremental impact of highway-related clutter needs to be carefully managed.

Development pressures are present and require careful management. Impacts from existing intrusive development should be mitigated where possible.

Authenticity

Interventions have been limited mainly to excavations and the re-erection of some fallen or buried stones to their known positions in the early and mid-twentieth century in order to improve understanding. Ploughing, burrowing animals and early excavation have resulted in some losses but what remains is remarkable in its completeness and concentration. The materials and substance of the archaeology supported by the archaeological archives continue to provide an authentic testimony to prehistoric technological and creative achievement. This survival and the huge potential of buried archaeology make the property an extremely important resource for archaeological research, which continues to uncover new evidence and expand our understanding of prehistory. Present day research has enormously improved our understanding of the property.

The known principal monuments largely remain in situ and many are still dominant features in the rural landscape. Their form and design are well-preserved and visitors are easily able to appreciate their location, setting and interrelationships which in combination represent landscapes without parallel.

At Stonehenge several monuments have retained their alignment on the Solstice sunrise and sunset, including the Stone Circle, the Avenue, Woodhenge, and the Durrington Walls Southern Circle and its Avenue. Although the original ceremonial use of the monuments is not known, they retain spiritual significance for some people, and many still gather at both stone circles to celebrate the Solstice and other observations. Stonehenge is known and valued by many more as the most famous prehistoric monument in the world.

There is a need to strengthen understanding of the overall relationship between remains, both buried and standing, at Stonehenge and at Avebury.

Protection and management requirements

The UK Government protects World Heritage properties in England in two ways: firstly, individual buildings, monuments and landscapes are designated under the Planning (Listed Buildings and Conservation Areas) Act 1990 and the 1979 Ancient Monuments and Archaeological Areas Act, and secondly through the UK Spatial Planning system under the provisions of the Town and Country Planning Acts. The individual sites within the property are protected through the Government's designation of individual buildings, monuments, gardens and landscapes.

Government guidance on protecting the Historic Environment and World Heritage is set out in National Planning Policy Framework and Circular 07/09. Policies to protect, promote, conserve and enhance World Heritage properties, their settings and buffer zones are also found in statutory planning documents. The protection of the property and its setting from inappropriate development could be further strengthened through the adoption of a specific Supplementary Planning Document.

At a local level, the property is protected by the legal designation of all its principal monuments. There is a specific policy in the Local Development Framework to protect the Outstanding Universal Value of the property from inappropriate development, along with adequate references in relevant strategies and plans at all levels. The Wiltshire Core Strategy includes a specific World Heritage Property policy. This policy states that additional planning guidance will be produced to ensure its effective implementation and thereby the protection of the World Heritage property from inappropriate development. The policy also recognises the need to produce a setting study to enable this. Once the review of the Stonehenge boundary is completed, work on the setting study shall begin.

The Local Planning Authority is responsible for continued protection through policy development and its effective implementation in deciding planning applications with the management plans for Stonehenge and Avebury as a key material consideration. These plans also take into account the range of other values relevant to the site in addition to Outstanding Universal Value. Avebury lies within the North Wessex Downs Area of Outstanding Natural Beauty, a national statutory designation to ensure the conservation and enhancement of the natural beauty of the landscape.

About a third of the property at both Stonehenge and Avebury is owned and managed by conservation bodies: English Heritage, a non-departmental government body, and the National Trust and the Royal Society for the Protection of Birds which are both charities. Agri-environment schemes, an example of partnership working between private landowners and Natural England (a non-departmental government body), are very important for protecting and enhancing the setting of prehistoric monuments through measures such as grass restoration and scrub control. Much of the property can be accessed through public rights of way as well as permissive paths and open access provided by some agri-environment schemes. Managed open access is provided at Stonehenge. There are a significant number of private households within the property and local residents therefore have an important role in its stewardship.

The property has effective management plans, coordinators and steering groups at both Stonehenge and Avebury. There is a need for an overall integrated management system for the property which will be addressed by the establishment of a coordinating Stonehenge and Avebury Partnership Panel whilst retaining the Stonehenge and Avebury steering groups to enable specific local issues to be addressed and to maintain the meaningful engagement of the community. A single property management plan will replace the two separate

Adoption of retrospective Statements of Outstanding Universal Value

WhC-13/37.COM/8E, p. 293
management plans.
An overall visitor management and interpretation strategy, together with a landscape strategy needs to be put in place to optimise access to and understanding of the property. This should include improved interpretation for visitors and the local community both on site and in local museums, holding collections excavated from the property as well as through publications and the web. These objectives are being addressed at Stonehenge through the development of a visitor centre and the Interpretation, Learning and Participation Strategy. The updated Management Plan will include a similar strategy for Avebury. Visitor management and sustainable tourism challenges and opportunities are addressed by specific objectives in both the Stonehenge and Avebury Management Plans.
An understanding of the overall relationship between buried and standing remains continues to be developed through research projects such as the “Between the Monuments” project and extensive geophysical surveys. Research Frameworks have been published for the Site and are regularly reviewed. These encourage further relevant research. The Woodland Strategy, an example of a landscape level management project, once complete, can be built on to include other elements of landscape scale planning.
It is important to maintain and enhance the improvements to monuments achieved through grass restoration and to avoid erosion of earthen monuments and buried archaeology through visitor pressure and burrowing animals. At the time of inscription the State Party agreed to remove the A344 road to reunite Stonehenge and its Avenue and improve the setting of the Stone Circle. Work to deliver the closure of the A344 will be complete in 2013. The project also includes a new Stonehenge visitor centre. This will provide world class visitor facilities including interpretation of the wider World Heritage property landscape and the removal of modern clutter from the setting of the Stone Circle. Although substantial progress is being made, the impact of roads and traffic remains a major challenge in both parts of the World Heritage property. The A303 continues to have a negative impact on the setting of Stonehenge, the integrity of the property and visitor access to some parts of the wider landscape. A long-term solution remains to be found. At Avebury, a World Heritage Site Traffic Strategy will be developed to establish guidance and identify a holistic set of actions to address the negative impacts that the dominance of roads, traffic and related clutter has on integrity, the condition and setting of monuments and the ease and confidence with which visitors and the local community are able to explore the wider property.

Adoption of retrospective Statements of Outstanding Universal Value

WHC-13/37.COM/8E, p. 294
Appendix B – A303 Amesbury to Berwick Down Heritage Monitoring and Advisory Group (HMAG) and the Scientific Committee Terms of Reference

HMAG

HMAG will provide advice on the requirements with regard to the historic environment impacts of the project’s design, assessment, implementation and mitigation where it relates to the Stonehenge World Heritage Site (WHS), ensuring the protection of its Outstanding Universal Value (OUV). Where supplementary advice and expertise are required HMAG will request advice from members of the Scientific Committee (see below).

Membership

Membership of the HMAG comprises the following:

- English Heritage (Senior Curator, Stonehenge WHS).
- Historic England (Inspector of Ancient Monuments);
- National Trust (Archaeologist, Stonehenge and Avebury WHS);
- Wiltshire Council (Wiltshire Council Archaeology Service)

Purpose

While recognising, and without prejudice to, the particular statutory and advisory roles and responsibilities of their individual organisations throughout the life of the project the Group will advise on and formulate requirements for, guide and monitor the development and delivery of proposals in order to ensure the consistent protection of the OUV, integrity and authenticity of the WHS in particular, and the historic environment in general.

In particular the Group will:

- Respond to and advise on specific route proposals as they are developed, setting out the requirements for the protection of the OUV and the historic environment;
- Respond to and provide guidance on design and implementation proposals as they are developed and monitor their delivery to ensure minimum impact on the OUV of the WHS and the historic environment;
- Set out the requirements on the necessary archaeological research design;
• Formulate a set of principles for archaeological evaluation

• Formulate a strategy for the programme of archaeological evaluation

• Formulate and set out requirements on the scale, methodologies and techniques of archaeological evaluation and assessment, and monitor their delivery;

• Formulate archaeological mitigation requirements, and monitor their delivery;

• Formulate and monitor requirements for reporting, publication and archiving in relation to all assessment and fieldwork (assessment, evaluation and mitigation), maximising the opportunities for public benefit; and

• Provide the Highways England Project Board with updates, advice and guidance on issues relating to the archaeological and wider heritage impacts of the project’s design and implementation via DCMS.

Scientific Committee

The work of the Scientific Committee will take place at the request of Highways England in the context of their A303 Stonehenge: Amesbury to Berwick Down Road Scheme

The role of the HMAG Scientific Committee is to inform and advise HMAG (and by extension Highways England) in the pursuit of their function on the A303 Stonehenge Amesbury to Berwick Down project where it relates to the WHS, to provide advice in relation to historic environment impacts as the project proceeds through its design, assessment, mitigation and construction stages.

Membership

The Scientific Committee should consist of members who have a required specialist skillset or are experts in a specific aspect of the landscape of the Stonehenge WHS. The composition of the Committee will comprise:

• HMAG

• Experts who have a required specialist skillset or expertise in a specific aspect of the landscape of the Stonehenge WHS.

Purpose

At the request of HMAG and Highways England, members of the Scientific Committee will be invited to draw on their individual expertise and provide advice on particular issues relating to the historic environment impacts of the project’s environmental assessment, design and construction in relation to the Stonehenge WHS landscape. The Scientific Committee will support HMAG in its task of advising and guiding the development and delivery of the project in a way that ensures the historic environment dimensions of the project are clearly and consistently assessed and managed for the protection of the OUV of the WHS, and of the historic environment in general within the WHS. It will also ensure excellence in the design and provision of archaeological assessment, evaluation, mitigation and fieldwork.
More specifically, the Scientific Committee will support HMAG in:

- Agreeing a set of principles for archaeological assessment and evaluation;
- Developing an archaeological evaluation strategy;
- providing advice on the development of the preferred route through design, including advising on how the route can best be integrated into the landscape, and monitoring during construction;
- Providing advice on the archaeological research design
- Formulating archaeological mitigation requirements; and
- Formulating and monitoring requirements for reporting, publication and archiving in relation to all assessment and fieldwork (assessment, evaluation and mitigation), maximising the opportunities for public benefit.

**Process of Referral**

Issues may be referred to the Scientific Committee in accordance with these Terms of Reference and advice sought by:

- HMAG
- Highways England and their consultants via HMAG
- Members of the Scientific Committee

**Structure, Operation and Administration**

The work of the Scientific Committee will take place in the context of Highway’s England’s A303 Stonehenge: Amesbury to Berwick Down Road Scheme. The Committee is not expected to address wider questions of need or strategic choice, but to support implementation of the project in a way that best addresses its opportunities and impacts and ensures it is managed for the benefit of the OUV of the WHS. The Committee will not have any statutory function in its own right, but its advice and guidance will be available to inform the statutory consent processes. Highways England should give careful consideration to any advice given by the Scientific Committee and have due regard to that advice, general recommendations and the particular observations of the Committee on specific aspects of the scheme in relation to its archaeological mitigation.

The Scientific Committee will not be required to provide a consensus view but will capture the full range of expertise and advice of the Committee’s membership. The Committee will have an independent chair.

Both HMAG and the HMAG Scientific Committee will be supported by a secretariat provided by Highways England. The secretariat will prepare agenda and record minutes / actions, collating the range of views and advice from both HMAG and the HMAG Scientific Committee and managing the provision and distribution of project information to Committee members. The secretariat will prepare a formal report to Highways England on meeting proceedings.

The Scientific Committee will meet quarterly or at such frequency as the needs of the project dictates. From time to time and as the needs of the project dictates the advice of individual members of the Scientific Committee may be sought outside of Scientific Committee meetings in relation to their particular areas of expertise.
Conduct Guidance to individual Scientific Committee members

Conduct should be in the spirit of the Nolan Principles for public service. All Scientific Committee members are requested to respect the confidentiality of proceedings. The Chatham House Rule will apply to the Committee meetings.

Highways England may from time to time lead news releases about the workings of the HMAG Scientific Committee. Feedback prior to release will always be sought from Committee members. Consequently, individual members or their organisations may adopt a Highways England news release and disseminate information after Committee meetings – recognising nothing should be done to identify, either explicitly or implicitly, who said what.

Reimbursement of Travel Costs

Although HMAG Scientific Committee members will not be remunerated for participation in the Committee Highways England will reimburse reasonable (evidenced) travel expenses.

6 https://www.chathamhouse.org/about/chatham-house-rule#