

**Stonehenge A303 improvement:
Addendum to outline assessment of the impacts on
the Outstanding Universal Value of the World
Heritage property of potential route options
presented by Highways England for January 2017
Assessment of route option D081C**

**Nicola Snashall BA MA PhD MCIfA
National Trust**

**Christopher Young BA MA DPhil FSA
Christopher Young Heritage Consultancy**

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Executive Summary

Following a public consultation exercise in early 2017, Highways England have developed a further route option, D081C, for the A303 from the western tunnel portal to the western boundary of the Stonehenge World Heritage property. This report has been commissioned by Historic England and the National Trust to inform their response to this proposal. It describes and analyses only the impacts of option D081C and must be read in conjunction with our earlier report (Snashall and Young 2017), which contains our assessment of the remainder of the route and our overall evaluation of its impact on the Outstanding Universal Value of the World Heritage property as a whole.

Route D081C as proposed by Highways England - D081C (2) - postulates a western tunnel exit just to the south of the current A303 close to the Normanton Down barrow group. The below-ground section of the road is extended by a 300m long canopy (Fig. 3). From that exit, the new dual carriageway, utilising a shallow fold in the landscape, diverges slightly from the present line of the A303 and crosses the World Heritage boundary to the south of the present A303/ A360 junction. This part of the route is partly on the surface and partly in cutting. The A360 is diverted to the west, thus giving more space to the Winterbourne Stoke and Diamond barrow groups. The A303 passes under the new route of the A360 with a grade separated junction some 400m west of the World Heritage boundary. The visual impacts of the new route are assessed in Table 1. The direct physical impacts are assessed in Table 2.

The new route is close to three barrow groups, all of which are key attribute groups (Fig. 1). The tunnel passes under the northern part of the Normanton Down cemetery, comes to the surface close to its western edge and then passes between the Winterbourne Stoke and Diamond groups which are about 200m apart. Unlike D061 and D062, as proposed for the public consultation, this alignment is well clear of the solstitial midsummer sunrise/ midwinter sunset axis through Stonehenge. The new route does have visual impacts on relationships between key attribute groups. It will impact on the three barrow groups closest to it and also in distant views from attribute groups along the King Barrows/ Coneybury ridge and also from the Lake group. These distant impacts are likely to be acceptable.

This is not the case for the impacts on the three groups close to the new surface route. As presently proposed, the road would be highly visible in some views from Normanton Down to the Winterbourne Stoke and Diamond groups, and vice versa, since these view lines are generally aligned with the axis of the road. Traffic on the surface sections of the road will also be visible in views between the north-east part of the Winterbourne Stoke group and Normanton Down. Where the route passes between the Diamond and Winterbourne Stoke groups it will be highly obtrusive visually and aurally, even in cutting, because observers will be close to its line. Overall the direct physical impacts of the proposals on attributes of OUV are low; there is likely to be some physical damage to any surviving elements of a single previously excavated round barrow.

As presently proposed, this route option will have a severe adverse impact of very large significance on the Winterbourne Stoke, Normanton Down and Diamond groups. Despite the overall general benefits to the rest of the World Heritage property, the harm caused to these three barrow groups is unacceptable. In a 2016 public planning inquiry, the inspector said that a *WHS is made up of all its attributes and that*

none should be given greater priority than another; it is an integral whole (Planning Inspectorate 2016, para 18).

As part of the heritage impact assessment methodology recommended by ICOMOS (2011), we considered options for mitigating this adverse impact. Table 1 shows the effect of extending the bored tunnel in 100m increments for up to 500m with a 300m long canopy in each case. This would have two results. Firstly it would to varying degrees, dependent upon the location of the portal / canopy entrance for each option, reduce the length of visible road in the western part of the World Heritage Site. The local topography also means that the surface route will be deeper below surrounding ground levels, thus concealing traffic. Options D081C (5-7) would also reduce the risk of physical damage to archaeological sites which are attributes of Outstanding Universal Value.

These options do mitigate impacts to some extent but do not remove the adverse impact where the route passes close to, and between the Winterbourne Stoke and Diamond groups. This would remain unacceptably large. There would also still be adverse impact on the views along the road alignment from Normanton Down to the Winterbourne Stoke and Diamond groups, and vice versa. However we consider that this impact could be mitigated by placing a canopy over the road where it passes through this gap. To be effective, this canopy would need to be some 400m long.

By thus lowering the road and placing more of it under cover, we consider that it may be possible to mitigate its adverse impact to an extent which would be sufficient to protect the Outstanding Universal Value of these attributes, and of the World Heritage property as a whole. It is strongly recommended that this mitigation strategy should be explored and further proposals for this stretch of road developed to minimise adverse impact on attributes of Outstanding Universal Value. Because of the proximity of all three barrow groups to the proposed road, if an acceptable mitigation strategy can be identified, exceptional care will need to be taken during construction to avoid physical damage to them and to other attributes of Outstanding Universal Value.

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1 Introduction

Following initial analysis of responses to the public consultation on the A303 Amesbury to Berwick Down road improvement proposals, Highways England have proposed a further alternative location next to the present A303 for the western portal of the road tunnel, a canopy extending the section of the road below ground, a new route to the western boundary of the World Heritage property, and a new location for the junction with the A360. The bored tunnel would be 2.7kms long and the canopy extension 300m in length. A stretch of the A360 north and south of the present A303/ A360 junction would be diverted away from the World Heritage property. This new option is called D081C.

This addendum to our previous report (Snashall and Young 2017) has been requested by Historic England and the National Trust to inform their response to the new proposal in so far as it differs to the previous options proposed by Highways England in January 2017. It therefore considers only the impacts of the new route from the western tunnel portal. It does not discuss the impact of the scheme from the western portal eastwards. This addendum must be read in conjunction with that previous report.

Historic England and the National Trust requested that this review should also consider the impact of a portal position on the D081C alignment but equivalent to the 2.9km on-line scheme considered in our initial outline impact assessment of 2014 (Snashall and Young 2014). The latter of course started in a different position in the east to the options on which Highways England consulted in early 2017. The end of the bored tunnel section proposed in D081C is approximately 120 metres west of the 2.1km option (the previous 'Published Scheme' assessed in 2014) and approximately 80 metres east of the 2.5km option assessed in the 2014 report. Historic England and the National Trust have asked us to consider possible means of mitigating adverse impacts of this proposed route, in particular by lengthening the combined tunnel and canopy. This report has therefore assessed the following variants of the option:

1. 2.7 kms bored tunnel
2. 2.7 kms bored tunnel plus 300m canopy, as shown on Fig.3, giving a total below-ground length of 3kms (the scheme as proposed by Highways England in D081C)
3. 2.8 kms bored tunnel plus 300m canopy, giving a total below-ground length of 3.1kms
4. 2.9 kms bored tunnel plus 300m canopy, giving a total below-ground length of 3.2kms
5. 3.0 kms bored tunnel plus 300m canopy, giving a total below-ground length of 3.3kms
6. 3.1 kms bored tunnel plus 300m canopy, giving a total below-ground length of 3.4kms
7. 3.2 kms bored tunnel plus 300m canopy, giving a total below-ground length of 3.5kms

Together with the 2014 proposal for a 2.9kms online tunnel, this gives eight different options which are assessed below in Table 1 in Chapter 2. Table 1 also shows the impact of the current A303. There is a narrative description of the changing impacts of the differing positions of tunnel / canopy.

We have separately examined the case for further mitigation by placing a canopy from the current A303/ 360 junction eastwards. This is in order to mitigate the adverse impacts of the road where it passes through the gap between the Winterbourne Stoke and Diamond barrow groups. At its narrowest, this gap (north-south) between the barrow groups is approximately 200m wide.

Changes in context (Fig.1)

Since our first assessment in 2014, considerable archaeological work has been carried out in this part of the World Heritage property (Historic England 2015 a, b, c, 2016, Wessex Archaeology 2016 a, b). The discovery of one previously unknown long barrow and the confirmation of the existence of a previously dismissed long barrow (the existence of which had been questioned on the basis of the interpretation of aerial photographs but which has now been confirmed by excavation) together with the discovery of a previously unknown hengiform monument near to The Diamond wood has led us to identify this dispersed group of monuments as the Diamond group. It has been numbered as 18 on Fig.1, in the list below, and has been included in Table 1.

Re-assessment of the Normanton Down group has suggested that its boundaries were drawn too tightly in our 2014 report (in part a product of the dominance of the existing A303 in current thinking). Its boundaries have been extended to the south to include outliers on the side of the valley south of the main group of barrows on Normanton Down. Its boundaries have also been extended to the north and west to include Normanton Gorse which contains at least one large barrow, as well as the Sun Barrow north of the wood and the so-called unnamed group by the A303 (formerly listed as Group 15). To avoid changes to numbering of remaining groups, this extended Normanton Down group has been numbered as 14/15 in the list below and in the assessment tables (Snashall and Young 2017, 8-9).

These reassessments add significant new relationships to be assessed for this new route D081C compared to our previous analysis of online tunnel options in 2014. This applies particularly to those between the Diamond group, the Winterbourne Stoke cemetery, and the Normanton Down group but also affects some more distant visual links. The proposed new route option passes closely between the Diamond group and Winterbourne Stoke groups, while its tunnel portal is very close to the Normanton Down group. Some of the key visual links are more-or-less aligned with the road itself.

Listed roughly from north-east to south-west, the 17 key groups of attributes are now (See Fig. 2):

- | | | | |
|----|--|-------|---|
| 1. | Durrington Wall | 10. | The Cursus W end |
| 2. | Woodhenge | 11. | Cursus Barrows |
| 3. | The Avenue east of King Barrow Ridge | 12. | Stonehenge |
| 4. | Unnamed barrow group either side of this stretch of the Avenue | 13. | Stonehenge Down Barrows |
| 5. | King Barrows (Old and New) | 14/15 | Normanton Down Barrows, including the unnamed group either side of the A303 |
| 6. | Coneybury Henge | 16. | Lake Barrows |
| 7. | Coneybury Barrow (King Barrow) south of Coneybury Henge | 17. | Winterbourne Stoke Barrows |
| 8. | The Cursus E end | 18. | The Diamond group |
| 9. | The Cursus centre | | |

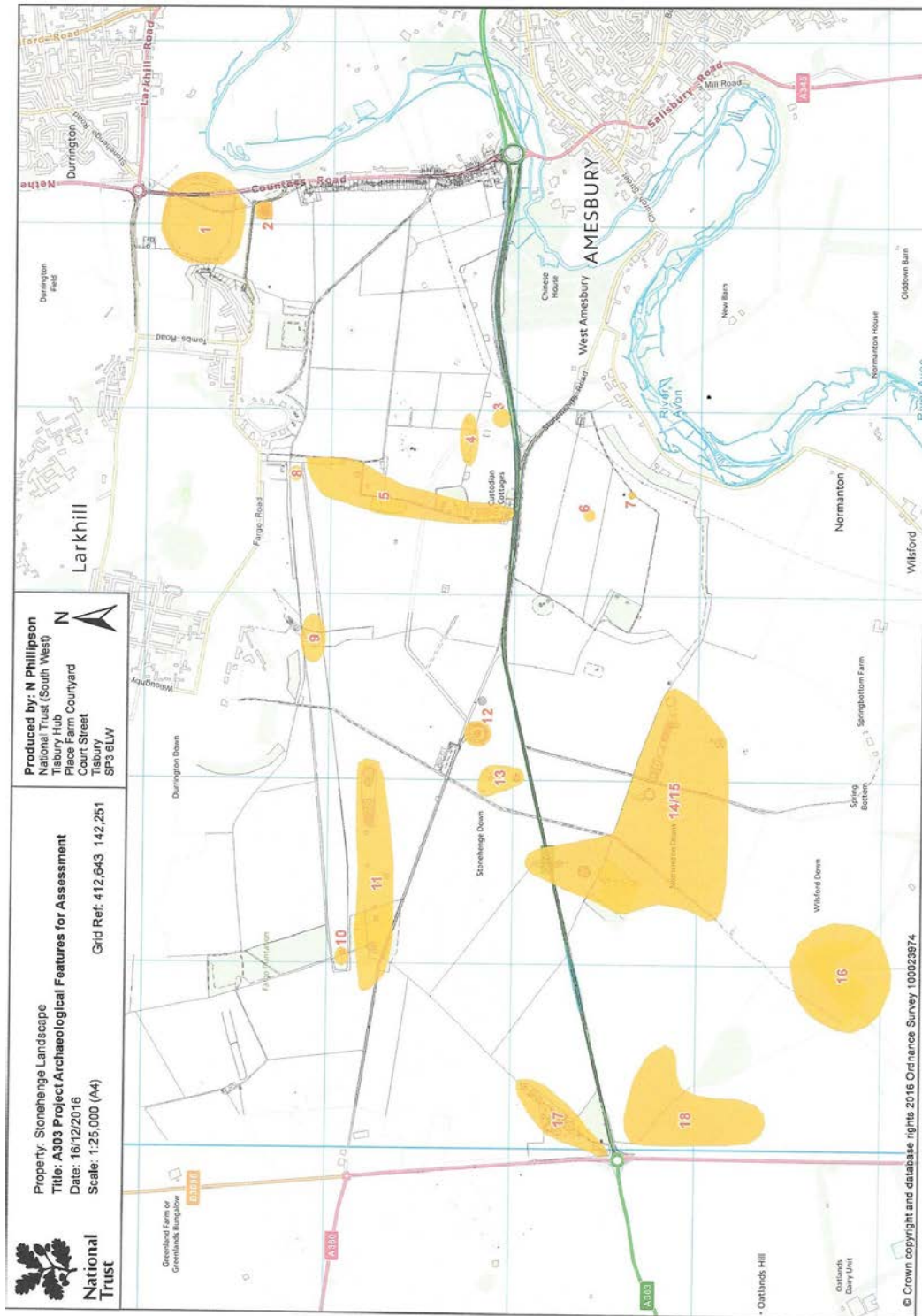


Fig. 1 Key groups of attributes of OUV in the Stonehenge World Heritage property

Methodology

The methodology used is that used in our two previous reports (Snashall and Young 2014, 2017). Visual impacts are assessed in Chapter 2 and direct impacts on archaeological features in Chapter 3. Our overall assessment is set out in Chapter 4. As previously, it is important to note that this is not a full Heritage Impact Assessment of the proposed works. It is a preliminary outline assessment based on available information and carried out within the time limits set for us. A full Heritage Impact Assessment will still need to be carried out by Highways England.

This methodology was developed by ICOMOS (ICOMOS 2011). The scale of impact of proposed changes has been ranked as:

- No change
- Negligible change
- Minor change
- Moderate change
- Major change

Change can be adverse or beneficial. This gives a nine-point scale with ‘neutral’ as its central point. The significance of the impact of the change is scored as a function of the importance of the attribute and the scale of change. For any feature of international significance (i.e. World Heritage properties and their attributes of OUV) the result of this scoring is as follows:

VALUE OF HERITAGE ASSET	SCALE & SEVERITY OF CHANGE/IMPACT				
	No change	Negligible change	Minor change	Moderate change	Major change
For WH properties Very High – attributes which convey OUV	SIGNIFICANCE OF EFFECT OR OVERALL IMPACT				
	(EITHER ADVERSE OR BENEFICIAL)				
	Neutral	Slight	Moderate/ Large	Large/very Large	Very Large

Fig 2: significance of impacts on World Heritage properties and their attributes (ICOMOS 2011, 9)

According to the ICOMOS HIA Guidance, therefore, any moderate or major impact on an attribute of OUV is of large/ very large significance.

The scale of assessment used for visual impacts in the 2014 assessment (Snashall and Young 2014, 39) has been used for this report also to ensure as far as possible consistency of approach:

- Impact has been assessed as major or very large significance when the A303 severs a visual connection or is very prominent in a view of one (e.g. the view from Stonehenge to Old and New King Barrows).

- Impact has been assessed as moderate of large/ very large significance where the A303 is visible but does not sever the viewline and is not central in the view.
- Impact is assessed as minor of moderate/ large significance when the A303 is barely visible or a distant backdrop in a view (e.g. the view from Durrington Walls to Woodhenge).
- Where there is no impact, the value has been given as none.

This ICOMOS methodology is robust and now widely recognised. However, we have identified some systemic issues in using it. It is difficult to use it to recognise that an impact can have both negative and positive effects. The scoring system assesses the significance of impacts according to the importance of the asset affected. Since all the attributes of Outstanding Universal Value affected by the proposals are of the highest significance by definition, the significance of any impacts of moderate or major change is therefore rated as large/ very large (ICOMOS 2011, para 5.8). This tends to bunch together a range of differing impacts under that one score. This can make it difficult to differentiate the varying impacts using just the scoring system. We have attempted to deal with this within the narrative in subsequent chapters (pp 12-13, 20).

2 The impact of Route Option D081C

Highways England has proposed a new route option, D081C for the west end of the road improvement across the Stonehenge component of the World Heritage property. This is close to the line of the A303 from the western mouth of the tunnel to the property boundary. This evaluation covers only the impacts of this part of the route. Impacts along the rest of the route to the east were considered in our previous report (Snashall and Young 2017), and the two reports must be read in conjunction.

The new option proposes a bored tunnel 2.7kms long with the option of a 300m canopy (Fig.3). This brings the point where the road emerges to just south of the present A303. From that point, the road runs part in shallow cutting, part on the surface through a shallow natural east-west depression. The length of this open-air stretch is c.1km within the World Heritage property. The route very gradually diverges from that of the present A303, crossing the boundary of the property c.100m south of the centreline of the present road through its junction with the A360. It then passes under the realigned A360 with a grade separated junction some 400m west of the World Heritage property.

The route makes good use of the existing topography and is moved away from the Winterbourne Stoke barrow group. This of course moves it closer to the less visible Diamond group. The gap between the two groups is in any case quite narrow. The eastern end of this surface stretch is close to the northern part of the Normanton Down group. The close proximity of these three barrow cemeteries makes the route a very sensitive one.

Table 1 shows the results of an assessment of its visual impact on the same terms as those of other route options in 2014 and 2017. The table also shows the impacts of the present A303 and the assessment made of the 2.9kms online routes in 2014. The 2014 assessments of the impact of the A303 and of the 2.9kms online route have been adjusted to take account of the changes, outlined above, in our understanding of the archaeology of this part of the World Heritage property (Snashall and Young, 2014, 2017).

It shows only those linkages where there is some impact from this western part of the proposed route. Analysis and a field visit (on 24th March) showed that in addition to the Winterbourne Stoke, Normanton and Diamond groups this section of road is likely to be visible from a small number of comparatively distant attributes (the east end of the Cursus, the King Barrows, Coneybury Henge and Coneybury Barrow) along the north-south ridge which divides the eastern part of the World Heritage property from the rest. These are over 2km from the new road, which is screened from Stonehenge and other attributes close to it by intervening high ground. It is also visible from the Lake barrow group to the south which is 1.3kms distant.

The new route is however very close to the three barrow groups of Normanton Down, the Diamond and Winterbourne Stoke. It therefore has the potential to disrupt sensitive visual links between these three groups.

This table measures the scale of the visual impact of the present A303 and of the likely impacts of the 2.9kms on-line bored tunnel assessed in 2014, and of route D081C as proposed by Highways England and of options for mitigation. The significance of these impacts is a function of their scale and of the importance of the asset affected. As attributes of Outstanding Universal Value, all the features and relationships here are of very high importance. This means that a current impact or future change of minor scale shown below is of moderate/ large significance, a moderate one is of large/ very large significance, and a major impact is of very large significance.

View from	To	Current A303	2014 2.9kms Online	D081C (1) no canopy	D081C (2) + 300m canopy	D081C (3) + 100m tunnel + 300m canopy	D081C (4) + 200m tunnel + 300m canopy	D081C (5) + 300m tunnel + 300m canopy	D081C (6) + 400m tunnel + 300m canopy	D081C (7) + 500m tunnel + 300m canopy
King Barrows (Old and New)										
1. King Barrows (Old and New)	Normanton Down Barrows	Major adverse	Moderate beneficial	Minor adverse	Moderate beneficial	Moderate beneficial	Moderate beneficial	Major beneficial	Major beneficial	Major beneficial
2. King Barrows (Old and New)	Lake Barrows	Major adverse	Major beneficial	Major beneficial	Major beneficial	Major beneficial	Major beneficial	Major beneficial	Major beneficial	Major beneficial
3. King Barrows (Old and New)	Winterbourne Stoke Barrows	Major adverse	Minor adverse	Moderate adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse
4. King Barrows (Old and New)	The Diamond	Major adverse	Minor adverse	Moderate adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse
Coneybury Henge										
5. Coneybury Henge	Normanton Down Barrows	Moderate adverse	Minor beneficial	Minor beneficial	Minor beneficial	Minor beneficial	Minor beneficial	Minor beneficial	Minor beneficial	Minor beneficial
6. Coneybury Henge	Lake Barrows	Minor adverse	Minor beneficial	Minor beneficial	Minor beneficial	Minor beneficial	Minor beneficial	Minor beneficial	Minor beneficial	Minor beneficial
7. Coneybury Henge	Winterbourne Stoke Barrows	Major adverse	Minor adverse	Moderate adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse
8. Coneybury Henge	The Diamond	Major adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse
Coneybury Barrow										
9. Coneybury Barrow	Normanton Down Barrows	Moderate adverse	Minor adverse	Moderate adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse
10. Coneybury Barrow	Lake Barrows	Minor adverse	Minor beneficial	Minor beneficial	Minor beneficial	Minor beneficial	Minor beneficial	Minor beneficial	Minor beneficial	Minor beneficial
11. Coneybury Barrow	Winterbourne Stoke Barrows	Major adverse	Minor adverse	Moderate adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse
12. Coneybury	The Diamond	Major	Minor	Moderate	Minor	Minor	Minor	Minor	Minor	Minor

This table measures the scale of the visual impact of the present A303 and of the likely impacts of the 2.9kms on-line bored tunnel assessed in 2014, and of route D081C as proposed by Highways England and of options for mitigation. The significance of these impacts is a function of their scale and of the importance of the asset affected. As attributes of Outstanding Universal Value, all the features and relationships here are of very high importance. This means that a current impact or future change of minor scale shown below is of moderate/ large significance, a moderate one is of large/ very large significance, and a major impact is of very large significance.

View from	To	Current A303	2014 2.9kms Online	D081C (1) no canopy	D081C (2) + 300m canopy	D081C (3) + 100m tunnel + 300m canopy	D081C (4) + 200m tunnel + 300m canopy	D081C (5) + 300m tunnel + 300m canopy	D081C (6) + 400m tunnel + 300m canopy	D081C (7) + 500m tunnel + 300m canopy
Barrow		adverse	adverse	adverse	adverse	adverse	adverse	adverse	adverse	adverse
Cursus East End										
13. Cursus E end	Normanton Down Barrows	Major adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse
14. Cursus E end	Lake Barrows	Major adverse	None	None	None	None	None	None	None	None
15. Cursus E end	Winterbourne Stoke Barrows	Major adverse	Minor adverse	Moderate adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse
16. Cursus E end	The Diamond	Major adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse
Normanton Down Barrows										
17. Normanton Down Barrows	King Barrows (Old & New)	Major adverse	Major beneficial	Major beneficial	Major beneficial	Major beneficial	Major beneficial	Major beneficial	Major beneficial	Major beneficial
18. Normanton Down Barrows	Coneybury Henge	Moderate adverse	Moderate beneficial	Moderate beneficial	Moderate beneficial	Moderate beneficial	Moderate beneficial	Moderate beneficial	Moderate beneficial	Moderate beneficial
19. Normanton Down Barrows	Coneybury Barrow	Minor adverse	Minor beneficial	Minor beneficial	Minor beneficial	Minor beneficial	Minor beneficial	Minor beneficial	Minor beneficial	Minor beneficial
20. Normanton Down Barrows	Cursus E end	Major adverse	Major beneficial	Major beneficial	Major beneficial	Major beneficial	Major beneficial	Major beneficial	Major beneficial	Major beneficial
21. Normanton Down Barrows	Lake Barrows	Major adverse	Major beneficial	Moderate adverse	Major beneficial	Major beneficial	Major beneficial	Major beneficial	Major beneficial	Major beneficial
22. Normanton Down Barrows	Winterbourne Stoke Barrows	Major adverse	Moderate adverse	Major adverse	Moderate adverse	Moderate adverse	Moderate adverse	Minor adverse	Minor adverse	Minor adverse
23. Normanton Down Barrows	The Diamond	Major adverse	Moderate adverse	Moderate adverse	Moderate adverse	Moderate adverse	Moderate adverse	Minor adverse	Minor adverse	Minor adverse
Lake Barrows										

This table measures the scale of the visual impact of the present A303 and of the likely impacts of the 2.9kms on-line bored tunnel assessed in 2014, and of route D081C as proposed by Highways England and of options for mitigation. The significance of these impacts is a function of their scale and of the importance of the asset affected. As attributes of Outstanding Universal Value, all the features and relationships here are of very high importance. This means that a current impact or future change of minor scale shown below is of moderate/ large significance, a moderate one is of large/ very large significance, and a major impact is of very large significance.

View from	To	Current A303	2014 2.9kms Online	D081C (1) no canopy	D081C (2) + 300m canopy	D081C (3) + 100m tunnel + 300m canopy	D081C (4) + 200m tunnel + 300m canopy	D081C (5) + 300m tunnel + 300m canopy	D081C (6) + 400m tunnel + 300m canopy	D081C (7) + 500m tunnel + 300m canopy
24. Lake Barrows	King Barrows (Old & New)	Major adverse	Major beneficial	Major beneficial	Major beneficial	Major beneficial	Major beneficial	Major beneficial	Major beneficial	Major beneficial
25. Lake Barrows	Coneybury Henge	Moderate adverse	Moderate beneficial	Moderate beneficial	Moderate beneficial	Moderate beneficial	Moderate beneficial	Moderate beneficial	Moderate beneficial	Moderate beneficial
26. Lake Barrows	Coneybury Barrow	Moderate adverse	Moderate beneficial	Moderate beneficial	Moderate beneficial	Moderate beneficial	Moderate beneficial	Moderate beneficial	Moderate beneficial	Moderate beneficial
27. Lake Barrows	Cursus E end	Major adverse	Major beneficial	Major beneficial	Major beneficial	Major beneficial	Major beneficial	Major beneficial	Major beneficial	Major beneficial
28. Lake Barrows	Normanton Down Barrows	Moderate adverse	Moderate beneficial	Minor adverse	Moderate beneficial	Moderate beneficial	Moderate beneficial	Moderate beneficial	Moderate beneficial	Moderate beneficial
29. Lake Barrows	Winterbourne Stoke Barrows	Major adverse	Moderate adverse	Moderate adverse	Moderate adverse	Moderate adverse	Moderate adverse	Moderate adverse	Moderate adverse	Moderate adverse
30. Lake Barrows	The Diamond	Major adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse
Winterbourne Stoke Barrows										
31. Winterbourne Stoke Barrows	King Barrows (Old & New)	Major adverse	Minor adverse	Moderate adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse
32. Winterbourne Stoke Barrows	Coneybury Henge	Major adverse	Minor adverse	Moderate adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse
33. Winterbourne Stoke Barrows	Coneybury Barrow	Major adverse	Minor adverse	Moderate adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse
34. Winterbourne Stoke Barrows	Cursus E end	Moderate adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse	Minor adverse
35. Winterbourne Stoke Barrows	Normanton Down Barrows	Major adverse	Major adverse	Major adverse	Major adverse	Major adverse	Major adverse	Minor adverse	Minor adverse	Minor adverse
36. Winterbourne	Lake Barrows	Major	Major	Major	Major	Major	Major	Major	Major	Major

This table measures the scale of the visual impact of the present A303 and of the likely impacts of the 2.9kms on-line bored tunnel assessed in 2014, and of route D081C as proposed by Highways England and of options for mitigation. The significance of these impacts is a function of their scale and of the importance of the asset affected. As attributes of Outstanding Universal Value, all the features and relationships here are of very high importance. This means that a current impact or future change of minor scale shown below is of moderate/ large significance, a moderate one is of large/ very large significance, and a major impact is of very large significance.

View from	To	Current A303	2014 2.9kms Online	D081C (1) no canopy	D081C (2) + 300m canopy	D081C (3) + 100m tunnel + 300m canopy	D081C (4) + 200m tunnel + 300m canopy	D081C (5) + 300m tunnel + 300m canopy	D081C (6) + 400m tunnel + 300m canopy	D081C (7) + 500m tunnel + 300m canopy
Stoke Barrows		adverse	adverse	adverse	adverse	adverse	adverse	adverse	adverse	adverse
37. Winterbourne Stoke Barrows	The Diamond	Major adverse	Major adverse	Major adverse	Major adverse	Major adverse	Major adverse	Major adverse	Major adverse	Major adverse
The Diamond Group										
38. The Diamond Group	King Barrows (Old and New)	Major adverse	Major adverse	Major adverse	Major adverse	Major adverse	Major adverse	Major adverse	Major adverse	Major adverse
39. The Diamond Group	Coneybury Henge	Moderate adverse	Moderate adverse	Moderate adverse	Moderate adverse	Moderate adverse	Moderate adverse	Moderate adverse	Moderate adverse	Moderate adverse
40. The Diamond Group	Coneybury Barrow	Moderate adverse	Moderate adverse	Moderate adverse	Moderate adverse	Moderate adverse	Moderate adverse	Moderate adverse	Moderate adverse	Moderate adverse
41. The Diamond Group	Cursus E end	Major adverse	Major adverse	Major adverse	Major adverse	Major adverse	Major adverse	Major adverse	Major adverse	Major adverse
42. The Diamond Group	Normanton Down Barrows	Major adverse	Major adverse	Major adverse	Major adverse	Major adverse	Major adverse	Major adverse	Major adverse	Major adverse
43. The Diamond Group	Lake Barrows	None	None	None	None	None	None	None	None	None
44. The Diamond Group	Winterbourne Stoke Barrows	Major adverse	Major adverse	Major adverse	Major adverse	Major adverse	Major adverse	Major adverse	Major adverse	Major adverse

Table 1: Visual relationships with key attribute groups

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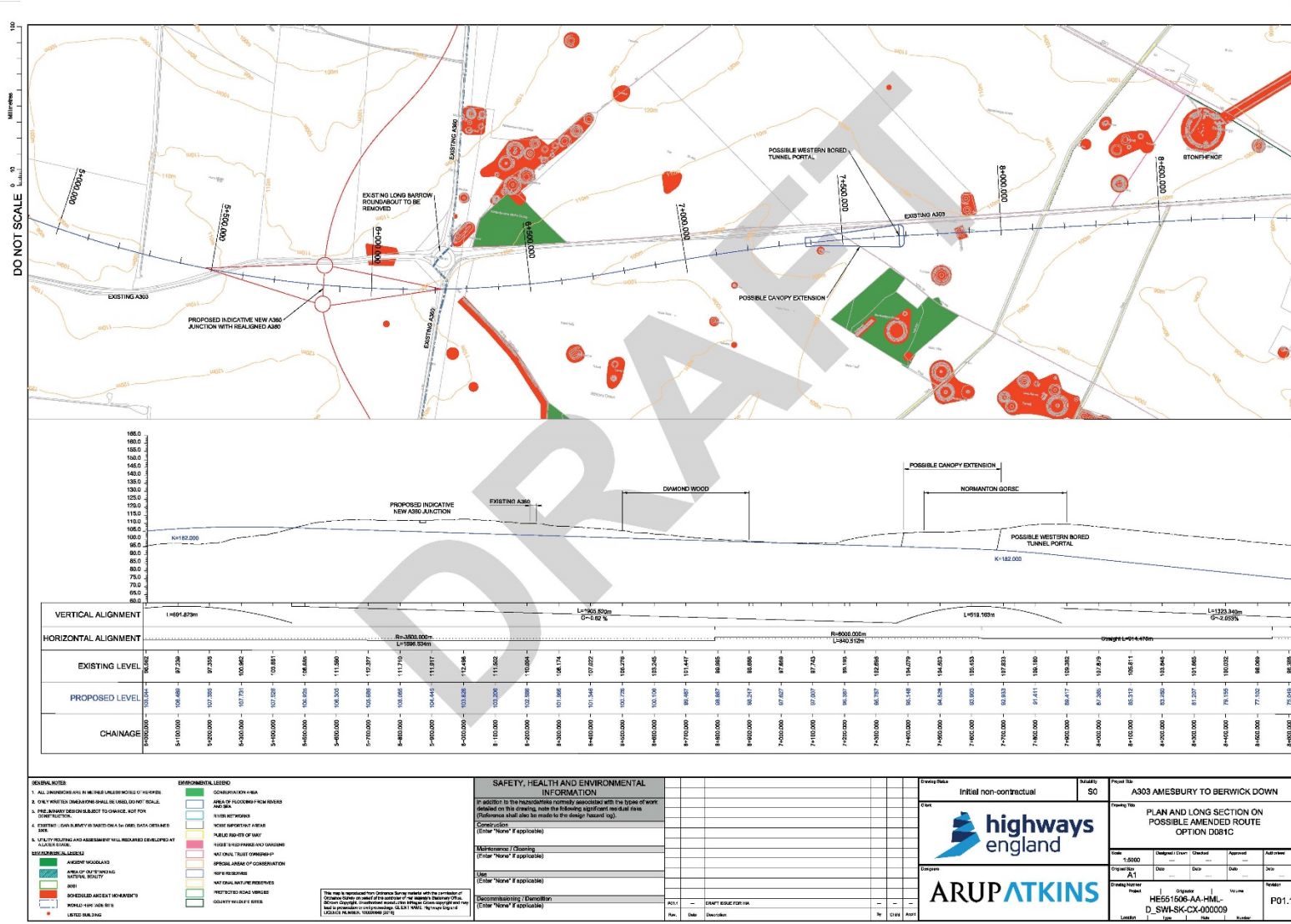


Fig 3: Highways England plan of option D081C

The sensitivity of this route is clear from the Table and from Fig.3. There are undoubtedly improvements in some of the distant views, but not all. In some cases, for example from the King Barrow/ Coneybury Ridge, the introduction of even a short stretch of dual carriageway into this landscape will have an adverse impact, particularly as the road line is on much the same alignment as the view, which will accentuate its impact.

The impact is much more severe for the barrow groups which are close to the new road proposal. As proposed, the route D081C, even with a 300m canopy, has a moderate/ major adverse impact of large/ very large significance on the Normanton Down, Winterbourne Stoke and Diamond barrow groups. Despite the gains elsewhere in the World Heritage property, the harm to these groups would have a substantial adverse impact on these attributes of Outstanding Universal Value.

We were therefore requested by Historic England and the National Trust to consider whether extending the length of the tunnel and/ or the canopy would mitigate the adverse impact. Table 1 assesses the impact of increasing the total length of underground highway along the proposed alignment in 100m iterations out to a maximum of 3.5kms (a 3.2km bored tunnel plus 300m canopy). This would have two results. Firstly it would to varying degrees, dependent upon the location of the portal / canopy entrance point for each option, reduce the length of visible road on this western side of the World Heritage property. Secondly it would lower the level of the road where it was in the open. This is because of falling ground levels west of the proposed exit and the need to maintain sufficient ground cover over both the bored tunnel and the canopy. With the exception of Option 1 which has no canopy we have assessed varying lengths of bored tunnel with a canopy of 300 metres for each. However the visual impacts on OUV would be similar if the additional length of bored tunnel were instead to be an additional length of canopy.

Placing the road sufficiently deep in cutting would effectively conceal traffic from views between attributes across the line of the road, provided the attributes are sufficiently far apart. Placing the road in cutting would be less effective in hiding the traffic when the view was more or less along the line of the road. This is the case for the views from the south-west end of Winterbourne Stoke Cemetery and from the Diamond group towards the northern part of the Normanton Down group and vice versa. Placing the road in cutting would also be less effective where either the two attributes were close together (as is the case for the south-west end of Winterbourne Stoke and the Diamond groups) or where the viewer is situated close to the cutting. In those circumstances the road is likely to obtrude both visually and aurally.

The options examined in Table 1 therefore mitigate the impact of the new route to some extent. For the options we have assessed this would be greatest if it was possible to extend the combined bored tunnel and canopy out to the 3.5kms length postulated in option D081C (7). The length of new open dual carriageway on the west side of the World Heritage property would be almost halved and the road bed would be sufficiently deep for traffic not to be visible when viewed at a distance from the side. However Options 5, 6 and 7 would have a substantively less adverse impact on the visual relationships between the three key attribute groups discussed above. The adverse impact overall would be lessened.

This approach alone also does not deal with the impact of the road on the south-west end of the Winterbourne Stoke group and the Diamond group. The open cutting here would clearly impact adversely on the setting of both monuments as well as on the linkage between them. The road

would still impact strongly on views between these two groups because some viewpoints would be very close to the edge of the road cutting. A further mitigation measure would be required. This could be achieved by placing a canopy over the road cutting eastwards from the present line of the A360 (the western boundary of the WHS). To be effective, this would need to be at least 400m long. A combination of both approaches to mitigation would probably be sufficient to mitigate the adverse impacts of the proposal. The actual length of the covered sections would of course need to reflect what is technically possible.

3 Direct physical impacts of new road construction on archaeological features of Outstanding Universal Value

The assessment of the impact of physical damage to archaeological sites caused by new construction work was carried out according to the methodology set out in our earlier reports (Snashall and Young 2014, 2017). As this assessment considers only those direct physical impacts related to the elements of the present proposals forming part of D081C at the western end of the World Heritage property it should be read in conjunction with both the methodology and the assessment set out in our 2017 report.

The results of the current assessment are set out on an option by option basis in Table 2. All of the impacts assessed are 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 Outstanding Universal Value can only be a negative impact. The assessment of whether the impact is negligible, minor, moderate or major is necessarily a matter of subjective professional judgement. Factors taken into consideration when making that assessment included:

- The proportion of the site or monument affected
- The degree to which the part of the site or monument would be affected; this could range between minor surface disturbance and wholesale destruction.
- The condition of the site or monument at present

In accordance with the ICOMOS impact assessment Guidelines (ICOMOS 2011), as all of the archaeological features identified as subject to physical impacts are attributes of Outstanding Universal Value and therefore of high importance, negligible impacts will be of slight significance; impacts of minor scale will be of moderate / large significance; impacts of moderate scale will be of large / very large significance and major impacts will be of very large significance.

In summary the number of archaeological attributes of Outstanding Universal Value that are impacted by Options 1 – 7 of the D081C proposals at the western end is low for all options, with only two monuments that are attributes of OUV (both relating to a single, extremely rare Beaker cemetery) either on the line of the proposed options or in such close proximity to them that it is considered that direct physical impacts from construction could not be avoided however careful the mitigation put in place.

In relation to the round barrow (and its associated Beaker cemetery) **SU14SW839 (also a Scheduled Monument HA list no. 101083)2:**

- Options 1 & 2 would result in a moderate adverse impact of large to very large significance
- Options 3 & 4 would result in a major adverse impact of very large significance
- Option 5 would result in a minor adverse impact of moderate to large significance

In contrast Options 6 & 7 would have no direct physical impacts and would result in an impact of no change to the Outstanding Universal Value of the World Heritage Property.

It should also be noted that for Options 1 to 5 the bored tunnel face and/or the proposed canopy and associated cutting / infrastructure is in very close proximity to the component parts of the

Normanton Down Barrow Group. Given the extreme archaeological sensitivity of this area any proposed construction work would have to have special measures put in place to ensure that no damage is done to any of the sites and monuments in this area. Likewise any future requirements to access this area for maintenance needs (for instance to the canopy or the infrastructure beneath it) would have to be assessed and the impacts fully understood and mitigated. In contrast the adoption of the mitigation proposed in Options 6 & 7 would result in a significantly lower risk of unintended adverse direct physical impacts on sites and monuments that are attributes of OUV of the World Heritage Property and in particular the Normanton Down group.

As set out above there is a high likelihood of direct physical impacts from construction with Options 1 - 4. Though measures could be put in place during construction to avoid / reduce or mitigate these, for some of the options the most effective conservation measure with regard to direct physical impacts would be the selection of an alternative option which would wholly avoid the risk of any construction impacts on all of these monuments – Options 6 and 7 would both provide effective options for avoiding the risk of adverse direct physical impacts to attributes of OUV. Option 5 would allow that risk to be reduced and potentially with appropriate mitigation to be effectively managed.

In addition, it should be noted that although evaluation has been undertaken across some areas covered by these current proposals in a previous iteration of the road proposals (Leivers and Moore 2008) evaluation and assessment techniques have advanced considerably in the intervening period. And new and thorough evaluation, assessment and archaeological excavation - appropriate to an archaeological World Heritage property - will be required prior to any construction work.

Table 2 Direct Physical Impacts of D081C Options 1 -7 on archaeological sites and monuments that are attributes of OUV

Wilts. HER Pref. Ref. Heritage Asset No.	Site name / description	Summary Comments	D081C (1) no canopy Impact / Comments	D081C (2) + 300m canopy Impact / Comments	D081C (3) + 100m tunnel + 300m canopy Impact / Comments	D081C (4) + 200m tunnel + 300m canopy Impact / Comments	D081C (5) + 300m tunnel + 300m canopy Impact / Comments	D081C (6) + 400m tunnel + 300m canopy Impact / Comments	D081C (7) + 500m tunnel + 300m canopy Impact / Comments
SU14SW184	Two excavated Bronze Age burials	No longer extant, fully excavated but forming part of a wider, nationally rare Beaker cemetery which also includes SU14SW839 below (Leivers & Moore 2008)	No change	No change	No change	No change	No change	No change	No change
SU14SW839 1010832	Round barrow	Forms part of a wider, nationally rare Beaker cemetery which also includes SU14SW184 above (Leivers & Moore 2008)	Moderate Adverse Asset in very close proximity to footprint of road / canopy. some direct physical impact to archaeological asset during construction therefore assessed as unavoidable	Moderate Adverse Asset in very close proximity to footprint of road / canopy. some direct physical impact to archaeological asset during construction therefore assessed as unavoidable	Major Adverse Construction of canopy and related infrastructure would wholly destroy this asset	Major Adverse Construction of canopy and related infrastructure would wholly destroy this asset	Minor Adverse Asset in very close proximity to bored tunnel exit some direct physical impact to archaeological asset during construction therefore assessed as highly likely	No change	No change

4 Discussion and Conclusion

This chapter sums up the impact of this particular option on the attributes of Outstanding Universal Value of the Stonehenge, Avebury and Associated Sites World Heritage property. It deals only with the impact of the D081C option (western bored tunnel portal, canopy and its associated road alignment) since the overall assessment of the impact of the road proposals is contained in our previous report to which this is an addendum (Snashall and Young 2017).

The World Heritage property has seven identified attributes. It is also necessary to consider any potential impacts on integrity and authenticity. The attributes are:

1. Stonehenge itself as a globally famous and iconic monument.
2. The physical remains of the Neolithic and Bronze Age funerary and ceremonial monuments and associated sites.
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 Neolithic and Bronze Age funerary and ceremonial monuments and their landscape settings on architects, artists, historians, archaeologists and others.

This assessment of the impact of the existing A303, the 2014 2.9kms on-line option, Highways England option D081C, and the various proposals for mitigation proposal, focuses primarily on the three key attributes of the Normanton Down, Diamond and Winterbourne Stoke barrow groups, and the contribution they make to the Outstanding Universal value of the property as a whole. We have also taken into account the impacts on the barrow groups themselves. These impacts are considered below in relation to the seven attributes identified in the World Heritage Site Management Plan (Simmonds and Thomas 2015, 32). Impacts have been summarised in Table 3.

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Table 3: Overall assessment of the impacts of the current A303, the 2014 2.9kms on line option, and D081C, and mitigation options, on the contribution of the Normanton Down, Diamond, and Winterbourne Stoke barrow groups to the OUV of the World Heritage Site

The significance of these impacts is a function of their scale and of the importance of the asset affected. As attributes of Outstanding Universal Value, all the features and relationships here are of very high importance. This means that a current impact or future change of negligible scale is of slight significance, a minor one is of moderate/ large significance, a moderate one is of large/ very large significance, and a major impact is of very large significance.										
Attributes of Outstanding Universal Value	A303 now	2014 2.9km on line	D081C (1)	D081C (2)	D081C (3)	D081C (4)	D081C (5)	D081C (6)	D081C (7)	+WS/ D canopy
1 Stonehenge itself as a globally famous and iconic monument	Major adverse	None	None	None	None	None	None	None	None	None
2 The physical remains of Neolithic and Bronze Age funerary and ceremonial monuments and associated sites	Major adverse	None	Negligible adverse	Negligible adverse	Minor adverse	Minor adverse	Negligible adverse	None	None	None
4 The design of Neolithic and Bronze Age funerary and ceremonial sites and monuments in relation to the skies and astronomy	Major adverse	Minor beneficial	Minor beneficial	Minor beneficial	Minor beneficial	Minor beneficial	Minor beneficial	Minor beneficial	Minor beneficial	Moderate beneficial
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 sites of the period, forming a landscape without parallel	Major adverse	Moderate adverse	Major adverse	Moderate adverse	Moderate adverse	Moderate adverse	Minor adverse	Minor adverse	Minor adverse	Moderate beneficial
7 The influence of the remains of Neolithic and Bronze Age funerary and ceremonial monuments and their landscape settings on architects,... and others	Major adverse	Minor beneficial	Minor beneficial	Minor beneficial	Minor beneficial	Minor beneficial	Minor beneficial	Minor beneficial	Minor beneficial	Minor beneficial
Integrity	Major adverse	Moderate adverse	Major adverse	Major adverse	Moderate adverse	Moderate adverse	Minor adverse	Minor adverse	Minor adverse	Moderate beneficial
Authenticity	Major adverse	Moderate adverse	Major adverse	Major adverse	Moderate adverse	Moderate adverse	Minor adverse	Minor adverse	Minor adverse	Moderate beneficial
Overall assessment of the impact on the OUV of Stonehenge component of the WHS	Major adverse	Moderate adverse	Major adverse	Major adverse	Moderate adverse	Moderate adverse	Minor adverse	Minor adverse	Minor adverse	Moderate beneficial
Overall assessment of the significance of the impact on the OUV of the Stonehenge component of the WHS	Very large negative	Large negative	Very large negative	Very large negative	Large negative	Large negative	Moderate negative	Moderate negative	Moderate negative	Large positive

1 Stonehenge itself as a globally famous and iconic monument.

This part of the road scheme is, on its own, unlikely to have any direct impact on the international renown of Stonehenge. The road scheme as a whole, if it removes the A303 as a visible feature from the World Heritage property without damage to its Outstanding Universal Value, will enhance this attribute.

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

On the basis of research to the present date, the proposed option D081C should have limited impact on the physical remains of Neolithic and Bronze Age funerary and ceremonial and associated sites. As far as we can tell, the footprint of the road as currently proposed by Highways England avoids known archaeology but thorough archaeological assessment, evaluation and excavation of the affected areas will be essential before any works are undertaken.

Physically two attributes of Outstanding Universal Value may be affected by construction of this route. One of these has been fully excavated while the other has extant below-ground remains. Both are part of a rare Beaker cemetery. The degree of adverse impact will depend on which option is selected. Options D081C (6) and (7) have the least risk of damage; while the risk attached to Option D081C (6) could be effectively removed or reduced if appropriately mitigated. Given the high sensitivity of the area as a whole it is essential that any proposed construction work is rigorously managed to minimise the risk of damage to archaeological assets, and that full archaeological evaluation and excavation is carried out before construction begins. This is especially true close to the Normanton Downs barrows close to the present A303. The risk of this type of damage would lessen as the bored tunnel section of the road gets longer.

The road will inevitably have an adverse impact on the setting of the three barrow groups closest to it at this side of the World Heritage property if it is visible. The impact of the current Highways England proposal, D081C (2), would be adverse because the road will obtrude on views of and from these cemeteries. There is likely also to be considerable aural impact for visitors to the northern part of Normanton Down and the south-west end of the Winterbourne Stoke groups, there will also be aural impacts to the Diamond group. This could be mitigated by placing the road underground as much as possible. Overall the range of impact for the various options ranges from major adverse through to no impact.

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

This attribute is discussed below with attributes 5 and 6.

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

Stonehenge is one of the best known prehistoric sites with astronomical associations. It is now generally recognised that it was aligned on the midwinter sunset – midsummer sunrise solstitial axis. This axis crosses the A303 just to the east of its junction with Byway 12 and then passes through the Sun Barrow, north of Normanton Gorse and part of the Normanton Down Barrow group. Unlike the most recently proposed offline options for the western end of the A303 scheme (D061 and D062), option D081C lies to the north of the axis and should not interfere with it. At its closest point, if the current Highways England proposal with its canopy was built, the open road would be c.400m north of the axis and thereafter diverging from it. It would however be necessary to minimise any light

from the road, for example from vehicles, and this could be done by ensuring that the road is in deep cutting and/ or covered over as much as possible.

Overall the impact is beneficial because of the removal of light pollution. The greatest benefit will result from the maximum placing of the road underground.

- 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.**

D081C (Option 2), as currently proposed by Highways England, would have a severe adverse impact of large/very large significance on these attributes in relation to the three barrow groups of Normanton Down, Winterbourne Stoke, and the Diamond. A new visible dual carriageway road would be imposed on the landscape, partly on the surface and partly in cutting, between the latter two groups at a point where they are within a few hundred metres of each other.

Views from parts of the Winterbourne Stoke group and from the Diamond group to the northern end of Normanton Down, and vice versa, would be very much along the line of the road. Views from the south-west end of the Winterbourne Stoke group towards the Diamond would be across the line of the road. Even if in cutting at this point, viewpoints would be so close to the road that it would be highly obtrusive both visually and aurally.

The option, as currently designed, would severely disrupt the ability to appreciate the relationship of the three barrow groups with the landscape (Attribute 3) and with each other (Attributes 4 and 5). The cumulative impact would be so severe as to cause a major adverse impact of very large significance to these three attribute groups despite positive benefits to the World Heritage property as a whole from the overall road scheme. This is notwithstanding the undoubted positive benefits to the Winterbourne Stoke cemetery of moving the line of the A303 away from it, and to the same group and to the Diamond group of moving the A360 up to 400m away. However, positive and negative impacts to an attribute from the same development proposal cannot cancel each other out.

The scheme could however be mitigated by a combination of extending the bored section of tunnel and the use of cut and cover canopies to extend the length of the road below ground, and also to conceal the road at the points where the Winterbourne Stoke group and Diamond barrow groups are closest to each other. It would be necessary to carry out a Heritage Impact Assessment of a more worked-up scheme along these lines to assess the efficacy of such mitigation, but it is possible that a scheme could be developed that is acceptable in terms of its impact on these three attribute groups.

- 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.**

The proposed works in this part of the World Heritage property are unlikely to have much impact on 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. Such impact as there may be will be a minor beneficial change.

Integrity

The character of the integrity of the World Heritage property is discussed in our main report (Snashall and Young 2017, 56-7). That discussion notes that new surface roads in the World Heritage property can have an adverse impact, although for the property as a whole the overall impact on integrity was evaluated as moderate to major beneficial change of large or very large significance. However, the impact on the specific attributes groups mainly affected by option D081C (2) would be a major adverse change of very high significance. This could be mitigated by measures discussed above to put more of the road out of sight. This would mitigate not just visual impacts, but also adverse aural impacts. It would also increase potential for improving access within the World Heritage property across the line of the A303.

Authenticity

Authenticity is about the truthfulness of the evidence for Outstanding Universal Value, and the ability to appreciate that evidence. The UNESCO Operational Guidelines (UNESCO 2015) list a series of tests for authenticity including form and design, materials and substance, location and setting and spirit of place (see UNESCO 2015 para 82 and also Young, Chadburn and Bedu 2009, 32-33). As for the A303 as a whole as it affects the World Heritage property, the impact of the proposed Option D081C is greatest on the location and setting, and the spirit and feeling of the three main attribute groups affected by the proposal. As proposed, the overall impact on authenticity would be negative. The mitigation strategies outlined above would minimise the negative impact.

Overall impact of Option D081C on the Outstanding Universal Value of the World Heritage property and on the Neolithic and Bronze Age funerary and ceremonial monuments directly affected.

Overall, the impact of the proposed scheme for improvement of the A303 through Stonehenge is broadly positive. However, this particular option for the western surface stretch of the A303 from the tunnel mouth to the property boundary does have adverse impacts on three important barrow cemeteries (Normanton Down, Winterbourne Stoke and the Diamond). On the basis of the Highways England design as proposed (D081C) (Options 1 and 2), these can be rated as major adverse changes of very large significance. Impacts on more distant attributes which are affected are much less and probably acceptable.

All impacts on attributes of Outstanding Universal Value need to be treated seriously. This is the view taken by the UK planning inspector in the Chacewater enquiry in the Cornwall and West Devon Mining Industry World Heritage property (Planning Inspectorate 2016, para 18). It is not acceptable to say that some attributes of Outstanding Universal Value are less important than others. However, within a large World Heritage property, assessment of a development proposal which affects many of its attributes has to come to an overall evaluation of the impact on the Outstanding Universal Value of the World Heritage property as a whole (ICOMOS 2011, Appendix 4, para 7). This in practice will lead to some balancing out of negative and positive impacts across the whole property to reach an overall judgement, unless the impact on negatively affected attributes is so great as to render a proposed development totally unacceptable.

The degree of change caused by the option as presented by Highways England, D081C (2), is damaging to three key groups of attributes of Outstanding Universal Value. Despite the benefits to the World Heritage property as a whole, the harm caused to these three groups is unacceptable (a major adverse impact of very high significance).

This report identifies possible mitigation that could reduce adverse impacts. Primarily this would involve lowering the road and placing more of it under cover. This could be done by extension of the bored tunnel and by use of canopies, both to extend the line of the tunnel (in particular D081C (5-7) would substantively mitigate the adverse impacts in this respect) and to bridge the road where it passes through the narrow gap between the Winterbourne Stoke and Diamond barrow groups. It is strongly recommended that this mitigation strategy should be explored and further proposals for this stretch of road developed to minimise adverse impacts on attributes of Outstanding Universal Value. Because of the proximity of all three barrow groups to the proposed road, if an acceptable mitigation strategy can be identified, exceptional care will need to be taken during construction to avoid physical damage to them.

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