CABINET
27th FEBRUARY 2004

A303 STONEHENGE IMPROVEMENT -
OBJECTORS' ALTERNATIVES

Purpose of Report

1. To inform the Cabinet of the alternative proposals put forward by objectors to the Highways Agency's preferred scheme and agree the County Council's response.

Background

2. The basis for the County Council's support for the Highways Agency's proposals for the A303 Stonehenge Improvement was set out in a report to Cabinet on 19th January 2004.

3. Six objectors to the published proposals have put forward alternatives to the Highways Agency's scheme. These were advertised in the local press on 29th and 30th January 2004. Brief descriptions and sketch plans of each alternative are attached at Appendix 1.

Alternative Route AR1 - (Dualling of A303 without a tunnel)

4. The inclusion of the tunnel in the road scheme is essential in securing the aims of the Stonehenge World Heritage Site (WHS) Management Plan. Without it the key issue of traffic impact on the setting of the stones is not addressed and there would be increased visual intrusion from the new dual carriageway.

5. The opportunity for travellers on the A303 to view Stonehenge from the road would be created. However, there would also be an adverse impact on the rights of way network through increased severance caused by the dualling of the A303, in contrast with the published scheme which enhances the rights of way network.

6. In ecological terms this scheme would provide none of the benefits of the Published Scheme in terms of the removal of a significant barrier and the consequent enhancement of large areas of chalk downland. The scheme would impact on current areas of grassland habitat through landtake associated with road widening, including some loss of chalk grassland within a County Wildlife Site (County or medium importance).

Alternative Route AR2 - (The Jackson Route)

7. The feasibility of this alternative depends on the assumption that Boscombe Down airfield is due to close and that the land it occupies will become available for other uses. The Highways Agency's enquiries have indicated that this will not be the case for the foreseeable future.
8. It is not possible to quantify the landscape impact of the scheme based on the information provided. Nevertheless, the scheme would entail significant landscape and visual impacts from the viaduct crossings of both the River Wylye Flood Plain and the River Avon Flood Plain, together with effects from new dual carriageway road infrastructure and traffic in areas of high quality, tranquil, open countryside. It is assumed, however, that the scheme would result in the removal of the A303 from the WHS. The international sensitivity of the WHS is weighted more heavily than disadvantages elsewhere, so if the A303 is proposed to be removed from the WHS, then it may be that this scheme would provide a slight overall landscape and visual benefit or a neutral effect when compared to the Published Scheme.

9. This scheme would be likely to result in unacceptable ecological impacts due to potentially severe impacts on the River Avon candidate Special Area of Conservation (cSAC). In particular, the A36 between the Deptford junction and Stapleford runs along the River Wylye valley, designated as part of the River Avon cSAC. Dualling of the existing A36 along this stretch would be likely to result in unacceptable impacts to the River Wylye (in terms of reduction in water quality from construction pollution and road drainage once operational; alterations to the hydrological regime due to road drainage; and loss of floodplain function).

10. In addition, the scheme proposes crossing the River Wylye twice and the River Avon once (on viaduct). It is not possible to quantify the ecological impact to the River Avon cSAC from these viaducts without detailed information on ecological baseline, scheme design and mitigation. However, the Published Scheme only crosses the River Avon cSAC once on viaduct (across the River Till). It is therefore reasonable to infer that cumulative effects on the River Avon cSAC, due to habitat loss and fragmentation and potential pollution during construction, would be substantially greater for this scheme compared to the Published Scheme.

11. This alternative involves substantial landtake from two chalk grassland County Wildlife Sites of County or medium importance. In addition, the length of new road is substantially greater than the Published Scheme, which would result in substantially greater habitat fragmentation. For example, effects on scheme-wide breeding birds due to the Published Scheme are estimated as being slight adverse. It is likely that effects on breeding birds due to this scheme would increase to moderate or large adverse, given the fragmentation of a much larger area of countryside.

12. The route crosses major complexes of archaeological features on Earls Farm Down east of Amesbury, to the west of Boscombe Down airfield south of Great Durnford, and in a wide section between Upper Woodford and Stapleford. These complexes are field systems and settlements of prehistoric and Roman date. They are mostly levelled by ploughing but contain important archaeological deposits and features, requiring evaluation and excavation in advance of development. In these areas the scheme would have a major impact on archaeology. There is also potential for damage to the major water meadow system south of Serrington and also to a lesser system to the south of Great Durnford. The Serrington system in particular is large and well preserved.
13. It is assumed that Mr. Jackson's proposal would include the closure of the A303 between Countess Roundabout and Longbarrow Crossroads and of the A344, although this is not explicitly stated in the information available. That being the case, the traffic impact on The Packway through Larkhill and on the B3086 in Shrewton might be similar to that of Alternative Route 4 below but the analysis has not been carried out for AR2. The proposal includes the dualling of the A36 between Stapleford and Wylde and the remodelling of the Wylde Interchange but the impact of these elements has not been assessed.

**Alternative Route AR3** - (Purple Variant)

14. The Purple and Purple Variant routes to the north of Stonehenge were considered at the 1995 Planning Conference held to seek agreement on the need for an improvement of the A303, the environmental constraints and an acceptable solution.

15. The route would pass unacceptably close to the eastern end of the cursus and through the centre of a round barrow cemetery on Durrington Down. It would cross a ploughed-out field system south-west of Airman's Corner and pass close to a large and well preserved Roman British village on Winterbourne Stoke Down. At its western end it would impact on features associated with the Iron Age settlement on Parsonage Down, but the design could be modified to improve on this.

16. It is not possible to quantify landscape impacts based on the level of information submitted. Nevertheless, the scheme would result in the creation of a significant length of new dual carriageway above that of the Published Scheme, within the WHS, and an additional length of dual carriageway within a Special Landscape Area. In addition, the scheme would impact on the landscape settings of Scheduled Ancient Monuments.

17. It is also not possible to quantify the level of ecological impact based on the information submitted. Nevertheless, the scheme would result in the loss of habitat importance for bat species in the vicinity of Scotland Lodge, above that of the Published Scheme (although this may be mitigated by realignment of the proposed route at this point to replicate that of the Published Scheme). In addition, the length of new road is substantially greater than the Published Scheme, leading to greater habitat fragmentation and consequent effects on species, such as breeding birds.

18. The Planning Conference resolutions included a rejection of the Purple Route and its variant as being unacceptable to local communities. The press notice on the Chairman's report of the Planning Conference included the comment from the then Transport Secretary, Sir George Young:-

"Northern routes around Stonehenge were firmly rejected by the Conference and I can confirm that these options will not be pursued; this removes any threat of property blight for Larkhill residents."
19. The Purple Route was considered again as part of a review of route options carried out in 1998. The review compared proposals for a 2km tunnel for the Stonehenge section with a 500m tunnel, a representative southern route and a representative northern route (the Purple Route). The outcome of the review was that the Stonehenge Improvement incorporating the Winterbourne Stoke Bypass and 2km tunnel was announced as an exceptional environmental scheme in July 1998.

20. In the circumstances, it is most unlikely that the Purple Variant route could be successfully promoted as an alternative to the preferred option.

**Alternative Route AR4 - (The Parker Plan)**

21. This alternative route has been vigorously promoted by Lieutenant Colonel Parker and the Salisbury Association of Council Taxpayers as a route which would not only meet the objectives of the WHS Management Plan but would also bring substantial traffic benefits for Salisbury and the villages in the Wylde Valley. The Highways Agency's consultants have produced a report, "A303 Stonehenge Improvement, 'The Parker Route' Assessment Report" which analyses the impact of the proposals.

22. To achieve the benefits for Salisbury, it would be necessary to include the construction of an Eastern Link between the realigned A303 and the A36 at Petersfinger, generally along the route of the Salisbury Eastern Bypass and Northern Link put forward in the early 1990s in conjunction with the A36 Salisbury Bypass proposals, as an integral part of the Parker Route. Construction of the Eastern Link would be the responsibility of the County Council and the Highways Agency has assumed that, for the Parker Route to be adopted, a partnership would have to be set up to jointly fund and promote the two routes as a single scheme.

23. The Highways Agency accepts that there are inaccuracies in the traffic modelling inherent in the need to combine earlier work carried out for the Salisbury Transport Study with the A303 Stonehenge Improvement Model. Allowing for the inaccuracies of the traffic modelling, in Salisbury there would be reductions in flows of 33% on Churchill Way North and 20% on Churchill Way East. The reduction would be 12% on Wilton Road and there would be approximately 30% less traffic on the A36 in the Wylde Valley. The relief on the A338 through the Winterbournes would be around 15%.

24. There are traffic movements from the north-west (A360 and B390) to the Amesbury area and the A303 east for which the Parker Route would mean a diversion of between 12 and 15km. Traffic would follow alternative routes rather than follow the Parker Route and the traffic model suggests that this would lead to substantial increases in flow on the B3086 through Shrewton (from 2,300 to 10,100 in 2008), The Packway through Larkhill (from 4,000 to 16,300), Countess Road North (from 11,400 to 18,500) and the A3028 through Durrington (from 8,900 to 12,100).
25. These flows are higher than would be acceptable on the affected roads and it is unlikely that the B3086 through Shrewton could support the volume of traffic indicated. Further traffic analysis could address these high flows in several ways:

- adjust the design of the scheme to discourage use of the affected routes
- assume the application of traffic management to the affected routes to discourage their use
- extend the model area to allow the use of alternative routes outside the study area
- adjust the speeds in the traffic model to reflect the expected congestion

26. In practical terms, options to reduce traffic on these links consist primarily of traffic management measures such as speed restrictions, traffic signals, build-outs, speed ramps and tables and different surface markings, colours and textures.

27. It is current practice to reduce the speed limit only if 85% of the existing traffic is already travelling close to or below that speed. If existing speeds are any higher the new speed restriction becomes unenforceable. For this reason it would not be advisable to reduce the speed limit on the rural sections of road because current speeds are high. The speed limit through Larkhill could possibly be reduced from 40 mph to 30 mph and extended beyond the village.

28. Traffic signals outside urban areas are generally controlled by demand and installed to improve flows and safety. The use of signals to introduce a significant delay could be open to abuse, to the detriment of safety, as drivers on the main road observed the side roads were empty with the main road signals remaining on red.

29. Physical obstructions such as build-outs, speed ramps and speed tables could be introduced through built-up areas such as Larkhill but would not be safe on rural sections. They would cause delays to emergency vehicles travelling from Amesbury to Shrewton and beyond.

30. To make the Parker Route more acceptable to traffic between Shrewton and Amesbury and beyond, the promoters have proposed a Western Fast Link involving several alterations to the County road network. Airman's Corner would be remodelled to give priority and free movement to A360 Shrewton to Longbarrow traffic. Longbarrow junction would be remodelled to again make the A360 free-flowing and a new junction with a link to the A303 Parker Route would be constructed on the A360 south of Druids Lodge.

31. The promoters have suggested a western bypass of Shrewton to enhance the Western Fast Link. It would run from the A360 to the north-west of Shrewton linking with the B390 and B3083 before joining the Western Fast Link via the existing A303.

32. The additional distance travelled by traffic from Shrewton to Amesbury via the Parker Route would be 12km (7.5 miles). A bypass of Shrewton and the Western Fast Link would reduce the time of travel only marginally compared with the original proposal and local traffic is unlikely to find the Parker Route any more acceptable.
33. The proposal crosses chalkland areas containing extensive indications of ancient field systems and settlements and, according to the assessment carried out by Wessex Archaeology, would have a direct effect on 56 known sites. The normal processes of archaeological survey and evaluation required for such a proposal would undoubtedly increase this number by a substantial factor. Although most sites encountered are already likely to be damaged by ploughing, the overall impact on the archaeological resource would be severe.

34. The principal archaeological benefit which would arise from this proposal is represented by the closure of the A303 and A344. This would improve substantially the environment of the major monuments within the WHS. From the landscape point of view, the scheme would have the same effects as the Published Scheme on the immediate landscape setting of Stonehenge and would provide significant landscape and visual benefits from the outer areas of the WHS. However, the scheme would have significant adverse visual effects on a much higher number of residential properties, on tranquil high quality landscape, and on sites and monuments outside the WHS, in particular Old Sarum, due to its considerable length. The Eastern Link would be close to residential properties and difficult to mitigate adequately. Although the international sensitivity of the WHS is weighted more heavily than disadvantages elsewhere, on balance the scheme does not offer an overall benefit in landscape and visual terms.

35. The environmental assessment has concluded that a net slight loss of ecological value would be likely to occur in the area due to this scheme, despite the significant ecological benefits predicted for the WHS. However, this conclusion is based on very little baseline knowledge of the ecology of the area. The report also states that other net ecological effects of significance could occur but that further studies are required to characterise them. Further, this initial conclusion is based on the assumption that expensive mitigation measures would be implemented (for example for bats, badgers and barn owls).

36. The scheme proposes crossing the Rivers Till, Avon and Bourne (all designated as part of the River Avon cSAC) on viaduct, in contrast to the Published Scheme, which crosses the River Avon cSAC (River Till) once. It is not possible to quantify the ecological impact to the River Avon cSAC from these viaducts without detailed information on ecological baseline, scheme design and mitigation. It is, therefore, reasonable to infer that cumulative effects on the River Avon cSAC, due to habitat loss and fragmentation and potential pollution during construction, have the potential to be substantially greater for this scheme compared to the Published Scheme.

37. The scheme would involve landtake from three County Wildlife Sites of County or medium importance for wildlife and the greater length of new road compared to the Published Scheme has the potential to result in substantially greater effects due to habitat fragmentation. In addition to increased loss of habitats such as species-rich grassland, woodlands and hedgerows, there would be the potential for increased impacts on breeding birds (particularly stone curlew, quail and barn owl), bats, badgers and terrestrial invertebrates.
Alternative Route AR5 - (4.5km tunnel)

38. A 4.5km long tunnel would remove the A303 from sight within the WHS apart from a section immediately west of Countess Roundabout. The principal impact of this alternative in comparison with the published scheme is in the vicinity of the A303/A360 Longbarrow junction where the western tunnel portal would be located some 750m to the west of Longbarrow Roundabout. A revised layout for the junction would be required incorporating a link back to the A360.

39. This would increase journey length for traffic from Amesbury to Shrewton by 1.5km resulting in diversions on to local roads which would appear more attractive than the A303 and A360. The Highways Agency's assessment assumes that traffic management measures such as build-outs, rumble strips and speed tables would be installed in Winterbourne Stoke, Larkhill, Countess Road and Porton Road to encourage traffic to remain on the A303 and A360.

40. Even with these traffic management measures in place, flows on local roads would increase. In 2008, the opening year, the flow through Larkhill would increase by between 410 and 490 vehicles per day on average, giving rise to increases of between 240 and 290 on Countess Road and between 130 and 160 on Porton Road.

41. The maintenance of the tunnel would require crossing points in the central reservation so that traffic could cross to the opposing tunnel. The proximity of the A360 junction would mean that the western maintenance crossing point would be situated within the junction area so that when the westbound tunnel bore was closed, so would be the westbound off-slip. Westbound traffic wishing to join the A360 would be diverted at Countess Roundabout via Countess Road and The Packway. Similarly, when the eastbound tunnel bore was closed, so would be the eastbound on-slip, so that A360 traffic wishing to join the A303 eastbound would be diverted along the same route.

42. Due to the length of a 4.5km tunnel, maintenance operations could take two night-time closures each month rather than one. Although the volume of diverting traffic would be small, traffic would be increased overnight through Larkhill and in Countess Road, and this would have an impact on local residents.

43. The proposal has no negative impact on archaeology and there would be the gain at the eastern end of leaving the line of the Avenue intact for potential future restoration. Towards the western end the gain consists mainly of removal of visual impact on the Longbarrow Crossroads group of monuments, but this could be achieved at more or less the cost of the existing proposal by moving the carriageway further south.

44. There would be benefits in terms of general landscape impact and landscape setting of Scheduled Ancient Monuments within the WHS, when compared to the Published Scheme. During construction it would be significantly more intrusive, but this would be temporary. Overall, this option would have significant landscape and visual benefits over the published scheme for the WHS.
45. Adverse ecological impacts arising from the 4.5km option compared to the 2.1km would be broadly similar apart from a slightly higher risk of groundwater pollution, and therefore local pollution of the River Avon cSAC, during tunnel construction. However, greater ecological benefits would be likely to result from this scheme compared to the Published Scheme due to the increased extent of reconnection to the landscape. For example, the 4.5km tunnel, combined with the conversion of much of the WHS to chalk grassland, would be likely to bring substantially increased benefits to breeding birds compared to the Published Scheme.

**Alternative Route AR6 - (Countess Junction at-grade)**

46. The main part of the Stonehenge Improvement is unaffected by this alternative which proposes a different arrangement at Countess Roundabout. Instead of the grade separated flyover junction included in the published scheme, it is proposed that the A303 should become a continuous dual carriageway through the junction at ground level with no connection for north-south traffic on Countess Road.

47. A small roundabout each side of the A303 would provide for slip roads on and off the trunk road with the exception of an on-slip eastbound. On the northern side of the A303 a new two-way link road about 1.5km long would connect to the Folly Bottom junction. Traffic wishing to travel to Amesbury from Countess Road (north) would use this link, the overbridge at Folly Bottom and London Road, and vice versa for northbound traffic.

48. The roundabout proposed for access to the new Visitor Centre could have some impact on a recently discovered Anglo Saxon settlement. The ecological impacts of the scheme cannot be fully quantified based on the information submitted. Nevertheless, the scheme would involve more works in close proximity to the River Avon cSAC compared to the Published Scheme, including the need for a new bridge north of the existing A303. It is not possible to quantify the ecological impact on the River Avon cSAC from these additional works without detailed information on ecological baseline, scheme design and mitigation. However, it is reasonable to predict that the scheme would result in increased impacts to the River Avon cSAC compared to the Published Scheme, including reduction in water quality from construction pollution, loss of floodplain function and habitat fragmentation and loss. The scheme would involve landtake from Countess Farm Swamp County Wildlife Site, of County or medium importance for wildlife. It is also likely to involve indirect habitat loss from this County Wildlife Site due to alteration of hydrology. Indirect habitat loss would adversely affect the internationally important population of Desmoulin's Whorl Snail found on the site.
Main Considerations for the Council

49. The Public Inquiry into the Highways Agency's published scheme is currently taking place in Salisbury. The County Council's case in support of the scheme was presented to the Inspector early in the Inquiry proceedings. It is anticipated that the Inquiry will run until the end of April and there will be an opportunity for the County Council's views on the Objectors' Alternative Routes to be presented to the Inspector. There is also the opportunity to submit counter-objections.

50. **Alternative Route AR1, the on-line dualling without the tunnel**, does not meet the objectives of the Stonehenge WHS Management Plan, which is supported by the County Council, and would result in a significant increase in landscape and visual impact within the WHS when compared to the Published Scheme. It is therefore proposed that a counter objection to this proposal should be submitted.

51. **Alternative Route AR2, the Jackson Route**, would give rise to unacceptable traffic volumes on unsuitable minor roads assuming that it could be built at some point in the future. It would have a major impact on ecology and archaeology. For these reasons it is proposed that a counter objection to this proposal should be submitted.

52. **Alternative Route AR3, the Purple Variant Route**, would not meet the objectives of the Stonehenge WHS Management Plan and would have an unacceptable impact on major archaeological features. The scheme would result in the creation of a significant length of new dual carriageway within the WHS above that of the Published Scheme and an additional length of dual carriageway within a Special Landscape Area. It was unacceptable to the local community when considered previously and assurances were given that it would not be pursued. It is proposed that a counter objection to this proposal should be submitted.

53. **Alternative route AR4, the Parker Route**, would result in significantly reduced traffic flows on the A36 in Salisbury and through the Wylde Valley. There would also be some reduction in traffic on the A338 through the Winterbourne Valley. There would be unacceptable increases on unsuitable minor roads in Shrewton and through Larkhill, as well as substantial increases on Countess Road (north) in Amesbury and the A3028 through Durrington.

54. It is not accepted that the proposed combination of the Western Fast Link, a Shrewton Bypass and traffic control measures through Larkhill and elsewhere would persuade traffic in the Amesbury to Shrewton corridor to travel via the Parker Route in preference to the 12km shorter route via The Packway.

55. In environmental terms, the Parker Route would achieve the objectives of the Stonehenge WHS Management Plan. However, 25km of new dual carriageway through open countryside would have a major impact on archaeology, landscape, local communities and agriculture. On balance, it is proposed that a counter objection to this proposal should be submitted.
56. **Alternative Route AR5, the 4.5km long tunnel**, would enhance the setting of the Longbarrow Crossroads group of monuments and remove more of the A303 and its traffic from the WHS, bringing landscape and ecological benefits. However, traffic calming measures would be required in Winterbourne Stoke, Larkhill, Countess Road and Porton Road, and there would still be an increase in traffic on The Packway. Some traffic would be diverted on to the local road network during routine maintenance operations on a regular monthly basis. On balance, it is proposed that a counter objection to this proposal should be submitted.

57. **Alternative Route AR6, the at-grade Countess junction**, would increase journey length for local traffic on Countess Road by up to 3km. The volume of traffic on London Road would increase substantially and it is likely that there would also be increases on Porton Road and the A3028 through Bulford and Durrington. The new link road could have an adverse impact on archaeology and would result in increased impact on the River Avon cSAC and on the Countess Farm Swamp County Wildlife Site. For these reasons it is proposed that a counter objection should be submitted to this alternative.

**Environmental Impact of the Proposal**

58. The environmental impact of the Published Scheme has been comprehensively assessed, the details being published in the Environmental Assessment for the scheme. The main environmental impacts of the objectors' alternatives have been described in the report.

**Risk Assessment**

59. The risks associated with implementing the A303 Stonehenge Improvement will be borne by the Highways Agency. If the Secretary of State does not confirm the Orders for the scheme following the Public Inquiry there is the possibility that one of the alternative routes put forward by objectors could be promoted instead.

60. There would inevitably be a substantial delay in the development of any alternative proposal. Road safety benefits would be lost in the interim and congestion problems would continue. The achievement of the Stonehenge WHS Management Plan objectives would be delayed.

**Financial Implications**

61. The scheme is funded by the Highways Agency. Costs to the County Council will be incurred for legal advice and representation at the Public Inquiry. The amount will depend on the number of days involved.

**Options Considered**

62. Members may wish to consider the option of not submitting counter objections to one or more of the objectors' alternative routes or may wish instead to support one of the alternatives.
Reasons for Proposal

63. To ensure that the County Council's position in relation to the objectors' alternatives is clear.

Proposal

64. That the Cabinet be recommended to agree that counter objections to the objectors' alternative proposals for the A303 Stonehenge Improvement be submitted to the Public Inquiry for the reasons set out in paragraphs 50 to 57 above.

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The following unpublished documents have been relied on in the preparation of this Report:

None