



National Audit Office

Report

by the Comptroller
and Auditor General

Department for Transport and Highways England

Improving the A303 between Amesbury and Berwick Down

Key facts

**£1.5bn to
£2.4bn**

estimated cost range
(2016 prices) to build
Amesbury to Berwick Down
project (including a tunnel
under Stonehenge)¹

£524m

estimated maintenance
costs (2016 prices) of the
Amesbury to Berwick Down
project over 60 years

3.3km

current length of proposed
tunnel under Stonehenge

73%	the cultural heritage benefits as a percentage of total monetised project benefits
1.15:1	latest benefit–cost ratio for the Amesbury to Berwick Down project
December 2026	estimated date for the Amesbury to Berwick Down project to be open to traffic
8	number of projects needed to complete the A303/A358 road corridor works
2029	intended completion date for all eight projects along the A303/A358 road corridor

Note

¹ These figures are subject to funding approval from HM Treasury and the outcome of commercial negotiations with contractors.

Summary

1 In December 2014, as part of the first Road Investment Strategy, the Department for Transport (the Department) committed to building a tunnel of at least 2.9 kilometres (1.8 miles) beneath the World Heritage Site at Stonehenge. This has since increased to 3.3 kilometres following public consultation and discussion with heritage stakeholders. The Department and Highways England expect the project to reduce congestion along the A303 between Amesbury and Berwick Down in Wiltshire, improve the setting of the World Heritage Site and, in combination with other projects along the route, support economic growth in the South West of England.

2 The A303 Amesbury to Berwick Down project forms part of the A303 and A358 road corridor that links the South East and South West of England. This corridor has more than 35 miles of single carriageway. There is more traffic on the road than the single carriageway sections are designed for, which results in high levels of traffic and slow and unreliable journeys. Local authorities and businesses along the route consider poor road connectivity as a major barrier to economic growth in the region.

3 In the Road Investment Strategy, the Department said it aimed to upgrade the entire A303/A358 road corridor to dual carriageway standard over the next 14 years through eight individual projects.¹ It committed £2 billion to starting three of these projects, including the A303 between Amesbury and Berwick Down, by March 2020.

4 The Department's objectives for the Amesbury to Berwick Down project are:

- Economic growth: to enable growth in jobs and housing by providing a free-flowing and reliable connection between the South East and the South West.
- Transport: to create a high-quality and reliable route between the South East and the South West that meets the future needs of traffic.
- Cultural heritage: to help conserve and enhance the World Heritage Site and make it easier to reach and explore.
- Environment and community: to improve biodiversity and provide a positive legacy for nearby communities.

5 The Amesbury to Berwick Down project is still at an early stage. The expected range of costs is £1.5 billion to £2.4 billion, and the Department and Highways England expect the upgraded road section to be open to traffic by December 2026.²

¹ Subsequent Highways England publications reference a date of 2029.

² These figures are subject to funding approval from HM Treasury and the outcome of commercial negotiations with contractors.

Scope of the report

6 This report follows on from our 2017 report, *Progress with the Road Investment Strategy*. It makes early observations on the progress and risks of constructing a tunnel through the World Heritage Site at Stonehenge, including:

- the background to the Amesbury to Berwick Down project (Part One);
- the case for the project (Part Two);
- progress on the project (Part Three).

The report does not look at other routes in the South West. Given the project is at an early stage, we do not seek to conclude on value for money. Instead, we highlight factors that will be relevant in the future to the overall value for money of the tunnel at Stonehenge and wider investment along the road corridor.

Key findings

7 There is a good strategic reason for the Amesbury to Berwick Down project.

It aims to improve the speed and reliability of journey times on the section of road between Amesbury and Berwick Down, which suffers from high levels of seasonal congestion. It also aims to protect and improve the World Heritage Site by removing most of the road from the site. By upgrading this section of the A303, the Department and Highways England intend to remove a key constraint that has prevented them upgrading the A303/A358 corridor and unlocking growth in the South West (paragraphs 1.4 to 1.6, 1.8 to 1.10).

8 Previous attempts to construct a tunnel at Stonehenge have been cancelled due to escalating costs and disagreements between stakeholders. Disagreements included the length of tunnel and the design of the project. For the current project, Highways England and the Department have gained agreement from the National Trust, English Heritage, Wiltshire Council and Historic England on a solution. Together they have agreed a minimum acceptable tunnel length that ensures an appropriate position for the tunnel entrances and road layout in order to protect the Outstanding Universal Value of the World Heritage Site. Highways England and the Department rejected longer and more expensive options as unaffordable. However, other bodies, including the UNESCO World Heritage Committee, have voiced concerns about the current proposed project (paragraphs 1.11, 1.12, 1.17 and 3.12 to 3.14).

9 The economic case relies on heritage benefits that are uncertain. The high cost of building a tunnel, compared with widening or moving the road, means that under the standard method for appraising transport projects, the project would only deliver 31p of benefit for every £1 spent. Highways England therefore expanded its appraisal to include a monetary value for cultural heritage, to reflect the project's wider objectives. At £955 million (2010 prices and discounted) these make up 73% of total monetised benefits. With these included, Highways England expects the project to deliver £1.15 of benefit for every £1 spent, which the Department considers low value for money. While Highways England used approved methodologies to do this, calculating benefits in this way is inherently uncertain and the Department advises decision-makers to treat them cautiously (paragraphs 2.5 to 2.7).

10 The project can only fully deliver its strategic objectives as part of a completed A303/A358 corridor. On its own, the Amesbury to Berwick Down project delivers some localised transport and economic benefits such as reduced congestion in the local area. It will also improve the setting of the Stonehenge monument by removing much of the road from the World Heritage Site. However, the project can only create a high-quality route to the South West and unlock the full growth potential in the region in combination with the seven other projects identified by Highways England as necessary to upgrade the A303/A358 (paragraphs 1.2, 2.3, 2.4, 2.6, 2.9 to 2.11 and Figures 6 and 7).

11 Highways England's approach to upgrading the A303/A358 corridor allows flexibility for future investment. The Department and Highways England have chosen not to produce an overarching programme-level business case for the A303/A358 despite initial plans to create one. Instead, they will approve the eight projects individually. This approach reduces the risk of committing to projects that no longer offer best value for money relative to other priorities and allows Highways England greater flexibility to reassess needs and prioritise future investment. Our previous report said that the Road Investment Strategy was an important step towards longer-term planning, and that the Department and Highways England needed a realistic and affordable plan to ensure they focused resources on those projects that offered best value for money (paragraphs 1.1, 2.12, 2.13 and 2.19).

12 The strategic cases for all eight projects, including Amesbury to Berwick Down, rely on the A303/A358 corridor. Using the Department's appraisal process, Highways England currently considers the five uncommitted projects along the corridor as low to poor value for money. This may mean the Department and Highways England choose to prioritise other projects with better economic cases. If it does not complete all eight projects, the Department will struggle to deliver all of the strategic objectives for the Amesbury to Berwick Down project. In addition, there are risks that without clear, measurable objectives, the benefits for the A303/A358 corridor upgrade may not be identified, monitored or delivered (paragraphs 2.14 to 2.19 and Figure 8).

13 The Amesbury to Berwick Down project has been delayed because of decisions on how the project will be funded. Up to February 2019, Highways England had spent £53 million on the Amesbury to Berwick Down project. At first, it was to be publicly financed, subject to approval of the business case. In October 2016, HM Treasury instructed the Department to use private finance, which delayed the planned start of works by 21 months from March 2020 to December 2021. In October 2018, the Chancellor of the Exchequer cancelled future PF2 deals, including for the Amesbury to Berwick Down project. The Department had expected the project to be privately financed when the government set the £25.3 billion draft funding package for the second Road Investment Strategy (covering 2020–2025). In order to fund the project, it may need to reconsider its priorities for the second Road Investment Strategy or it will need additional funding from HM Treasury. The government has said it remains committed to the project and has released £21.5 million of enabling works funding in advance of its business case approval to support the project in keeping to its 2026 target opening date. However, HM Treasury will make its decision on whether to provide additional funding for the A303 alongside all other capital projects as part of the Spending Review 2019 (paragraphs 3.3 and 3.4).

14 There are risks for Highways England and the Department to manage to ensure the project has a realistic chance of being value for money. Costs of major infrastructure projects, especially those with complex engineering solutions, typically increase over time. At the time the project was selected for the first Road Investment Strategy in 2014, the Department and Highways England had an estimated cost range of £0.9 billion to £1.3 billion (2010 prices). Like other cost estimates in the first road strategy, it was immature. The current range of capital costs of the project including VAT, is £1.5 billion to £2.4 billion (2016 prices) with the most likely cost expected at £1.9 billion. Excluding non-recoverable VAT, the expected most likely capital cost is £1.7 billion (2016 prices). These figures are subject to funding approval from HM Treasury and the outcome of commercial negotiations with contractors. The current ‘open to traffic’ date has not changed, despite delays to approvals. Highways England will also need to make sure that it has the capability and capacity to deliver this project throughout the project’s life and will need to continue to mitigate geological and archaeological risks. It has made early progress on understanding benefits. However, there remains further work to do for it to ensure it can demonstrate and measure project benefits in future (paragraphs 3.6, 3.8 and 3.11).

Concluding remarks

15 In pure economic terms, because of the high cost of building a tunnel, the Amesbury to Berwick Down project, at £1.15 of quantified benefit for every £1 spent, has a significantly lower benefit–cost ratio than is usual in road schemes. Given our experience of cost increases on projects of this kind, this ratio could move to an even lower or negative value. It will be even more important therefore that the Department and Highways England ensure that the project meets its strategic and heritage objectives, and that Highways England manages the project well. Currently, there are risks to Highways England’s approach that it will need to manage to ensure future value for money for the Amesbury to Berwick Down project, and its other investments along the A303/A358 corridor.

Recommendations

- a** Regarding the Amesbury to Berwick Down project, Highways England and the Department should review carefully the planned 'open to traffic' date to ensure it is achievable.
- b** The Department and Highways England should consider how it will reflect the following areas, which will be important to demonstrate future value for money of investments along the A303/A358:
 - clear, measurable objectives for delivering the whole road corridor;
 - clarity about the most appropriate sequencing of upgrades;
 - methodologies to analyse and capture the benefits, including those related to heritage benefits. Highways England has started work to develop programme-level benefits;
 - demonstrate need for investment in subsequent projects along the corridor; and
 - be transparent about the basis on which it approves projects that contribute to a wider strategic approach.

It could include these in a programme-level business case.

- c** Highways England and the Department should ensure that the lessons learned from their engagement with stakeholders on the Amesbury to Berwick Down project are captured and can be applied for future projects across government needing similar levels of stakeholder engagement.
- d** When considering projects that have implications beyond those usually associated with transport projects, such as those that deliver benefits normally delivered by other government departments or those that have ambitions to support economic growth, the Department and Highways England should work with other government departments to ensure that there are means for identifying, delivering and monitoring progress on delivering benefits which are jointly owned.
- e** When announcing the second Road Investment Strategy, the Department should ensure that it has documented its decision-making process for deciding which projects are included.