

A303 Stonehenge

Amesbury to Berwick Down
Technical Appraisal Report

Appendices G and H

Client Scheme Requirements, policy assessment and assessment summary

Volume 8

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Appendix G Client Scheme Requirements and policy assessment

G.1 Client Scheme Requirements and policy assessment

Appendix G1: CSRs and policy assessment

CSR Assessment Tables

Table 1: Option D061 (tunnel and surface route option north of Winterbourne Stoke)

Document	Relevant objectives	Summary of impacts	Score
Client Scheme Requirements	Transport: To create a high quality route option that resolves current and predicted traffic problems and contributes towards the creation of an Expressway between London and the South West	This option would increase capacity on the A303, thereby reducing delays and disruption and improving journey times and journey time reliability along the route option, particularly at weekends and in the summer months. In 2031, the largest reduction in average end-to-end journey times would be approximately 8.5 minutes eastbound in the AM peak. In 2051, the largest reduction would be approximately 9.5 minutes, also eastbound in the AM peak. This would improve the corridor for strategic traffic such as freight, and would support the South West regional economy by improving connectivity with the East and South East of England. It would also reduce the impact of traffic in local towns and villages, potentially supporting planned development in South Wiltshire by improving accessibility to key sites. The route option would be designed to current standards, which would help to improve safety, and increased capacity on the route option would improve resilience to accidents.	3
	Economic growth: In combination with other schemes on the route option, to enable growth in jobs and housing by providing a free flowing and reliable connection between the East and the South West peninsula	This option would increase capacity, thereby reducing congestion and improving traffic conditions, both around Amesbury and for strategic traffic moving between the East and the South West peninsula. This option would reduce journey times and journey time variability, and improve connectivity between the East and South West, which may help to support growth in jobs and housing across the region. At the local level, improved traffic conditions would have the potential to improve access to key sites in the Amesbury area such as Solstice Park business park, which could make these sites more attractive for potential developers and occupiers.	3
	Cultural heritage: To contribute to the conservation and enhancement of the WHS by improving access both within and to the site	A tunnel would remove the existing A303 and the sight and sound of associated road traffic noise from a key part of the Stonehenge WHS. This option would reduce severance within the Stonehenge WHS, providing a significant improvement on the setting of Stonehenge and other related monuments, and the outstanding universal value of the WHS. The eastern tunnel portal would also be to the east of the Avenue, a scheduled monument of high importance and currently severed by the existing road. This option would allow the WHS to be reconnected whilst maintaining access for Non-Motorised Users (NMUs) to the existing A303 and improving visitor experience and access. These are very notable benefits that when balanced against the adverse effects resulting from the introduction of major new infrastructure into the WHS and the impacts on important assets and key attributes of the site's OUV, would result in a Slight/Moderate Beneficial effect on the WHS. This option would also relieve congestion and improve traffic conditions for users of the A303. It is likely that improvements in local traffic conditions would result in improvements in access to the site.	2

Document	Relevant objectives	Summary of impacts	Score
	<p>Environment and community: To contribute to the enhancement of the historic landscape within the WHS, to improve biodiversity along the route option, and to provide a positive legacy to communities adjoining the road</p>	<p>In terms of the historic landscape, a tunnel would remove the road from a key part of the Stonehenge WHS, providing a significant improvement for the setting of Stonehenge and other related monuments, restoring the landscape and reconnecting features of high importance to the wider landscape that would contribute to a Slight/Moderate Beneficial effect on the WHS and improve biodiversity. Benefits of this route option in terms of biodiversity would include a shorter scheme in terms of its length, landscape reconnection and habitat restoration, leading to a reduction in road fatalities and increase in wildlife movement relative to route option F010.</p> <p>Outside of the WHS, this option has the potential to impact directly and indirectly on a number of European and nationally designated sites, including the Salisbury Plain SPA and Parsonage Down SSSI and NNR, the River Avon SAC (that includes the River Till) and River Avon System SSSIs (that overlap with the River Avon SAC).</p> <p>For communities adjoining the existing A303, this option would significantly reduce the impact of traffic in Winterbourne Stoke. There would also be beneficial effects for other communities such as Shrewton and Larkhill that are currently affected by rat-running. This option would result in a small net beneficial impact on noise, and there is also the potential for net improvement in local air quality due to a reduction to exposure of concentrations of particulate matter, although there is an increase in NOx emissions across the scheme area. There would, however, be a range of slight to moderate adverse effects on landscape character, including moderate adverse impacts on the Larkhill and Winterbourne Chalk Downland, Till Narrow Chalk River Valley, and Tilshead Chalk Downland Landscape Character Areas.</p>	3

Table 2: Option D062 (tunnel and surface route option south of Winterbourne Stoke)

Document	Relevant objectives	Summary of impacts	Score
Client Scheme Requirements	Transport: To create a high quality route option that resolves current and predicted traffic problems and contributes towards the creation of an Expressway between London and the South West	This option would increase capacity on the A303, thereby reducing delays and disruption and improving journey times and journey time reliability along the route option, particularly at weekends and in the summer months. In 2031, the largest reduction in average end-to-end journey times would be approximately 8.5 minutes eastbound in the AM peak. In 2051, the largest reduction would be approximately 9.5 minutes, also eastbound in the AM peak. This would improve the corridor for strategic traffic such as freight, and would support the South West regional economy by improving connectivity with the East and South East of England. It would also reduce the impact of traffic in local towns and villages, potentially supporting planned development in South Wiltshire by improving accessibility to key sites. Increased capacity on the route option would improve resilience to accidents, and the route option would be designed to current standards, which would help to improve safety.	3
	Economic growth: In combination with other schemes on the route option, to enable growth in jobs and housing by providing a free flowing and reliable connection between the East and the South West peninsula	This option would increase capacity, thereby reducing congestion and improving traffic conditions both around Amesbury and for strategic traffic moving between the East and the South West peninsula. This option would reduce journey times and journey time variability, and improve connectivity between the East and South West, which may help to support growth in jobs and housing across the region. At the local level, improved traffic conditions would have the potential to improve access to key sites in the Amesbury area such as Solstice Park business park, which could make these sites more attractive for potential developers and occupiers.	3
	Cultural heritage: To contribute to the conservation and enhancement of the WHS by improving access both within and to the site	A tunnel would remove the existing A303 and the sight and sound of associated road traffic noise from a key part of the Stonehenge WHS. D062 would reduce severance within the Stonehenge WHS, providing a significant improvement on the setting of Stonehenge and other related monuments, and the outstanding universal value of the WHS. The eastern tunnel portal would also be to the east of the Avenue, a scheduled monument of high importance and currently severed by the existing road. This option would allow the WHS to be reconnected whilst maintaining access for Non-Motorised Users (NMUs) to the existing A303 and improving visitor experience and access. These are very notable benefits that when balanced against the adverse effects resulting from the introduction of major new infrastructure into the WHS and the impacts on important assets and key attributes of the site's OUV, would result in a Moderate Beneficial effect on the WHS. This option would also relieve congestion and improve traffic conditions for users of the A303. It is likely that improvements in local traffic conditions would result in improvements in access to the site.	2
	Environment and community: To contribute to the	In terms of the historic landscape, a tunnel would remove the road from a key part of the Stonehenge WHS, providing a significant improvement for the setting of Stonehenge and other related monuments, restoring the landscape and reconnecting features of high importance to the wider	3

Document	Relevant objectives	Summary of impacts	Score
	<p>enhancement of the historic landscape within the WHS, to improve biodiversity along the route option, and to provide a positive legacy to communities adjoining the road</p>	<p>landscape that would contribute to a Moderate Beneficial effect on the WHS and improve biodiversity. Benefits of this route option in terms of biodiversity would include a shorter scheme in terms of its length, landscape reconnection and habitat restoration, leading to a reduction in road fatalities and increase in wildlife movement relative to route option F010.</p> <p>Outside of the WHS, this option has the potential to impact directly and indirectly on a number of European and nationally designated sites, the River Avon SAC (that includes the River Till) and River Avon System SSSIs (that overlap with the River Avon SAC).</p> <p>For communities adjoining the existing A303, this option would significantly reduce the impact of traffic in Winterbourne Stoke. There would also be beneficial effects for other communities such as Shrewton and Larkhill that are currently affected by rat-running. This option would result in a net beneficial impact on noise, and there is also the potential for net improvement in local air quality due to a reduction to exposure of concentrations of particulate matter, although there is an increase in NOx emissions across the scheme area. There would, however, be a range of slight to moderate adverse effects on landscape character, including moderate adverse impacts on the Larkhill and Winterbourne Chalk Downland, Till Narrow Chalk River Valley, and Tilshead Chalk Downland Landscape Character Areas.</p>	

Table 3: Option F010 (southern surface route option)

Document	Relevant objectives	Summary of impacts	Score
Client Scheme Requirements	Transport: To create a high quality route option that resolves current and predicted traffic problems and contributes towards the creation of an Expressway between London and the South West	This option would increase capacity on the A303, thereby reducing delays and disruption and improving journey times and journey time reliability along the route option, particularly at weekends and in the summer months. This would improve the corridor for strategic traffic such as freight, and would support the South West regional economy by improving connectivity with the East and South East of England. It would also reduce the impact of traffic in local towns and villages, potentially supporting planned development in South Wiltshire by improving accessibility to key sites along the A303 corridor, such as Solstice Park. The route option would be designed to current standards, which would help to improve safety, and increased capacity on the route option would improve resilience to accidents. However, this option would be longer than the existing A303, resulting in smaller journey time savings in comparison to options in Corridor D. In 2031, the largest decrease in average end-to-end journey times would be approximately 7 minutes eastbound in the AM peak. In 2051, the largest decrease would be approximately 9 minutes, also eastbound in the AM peak. There is also the potential that the longer route option could result in an increase in operating costs relative to the do minimum scenario, which could limit the benefits for users, particularly freight users.	2
	Economic growth: In combination with other schemes on the route option, to enable growth in jobs and housing by providing a free flowing and reliable connection between the East and the South West peninsula	This option would provide a dual carriageway route option to the south of Amesbury, increasing capacity and improving traffic conditions. Improving access to sites along the A303 corridor such as Solstice Park business parks could have the potential to make them more attractive to potential developers and occupiers. However, this route option is longer than the existing A303, resulting in smaller journey time savings in comparison to options in Corridor D, and may have the potential to result in an increase in operating costs relative to the do minimum scenario. While this option would improve connectivity between the East and South West, this could limit the benefits for users - particularly freight users – and therefore the extent to which improved connectivity supports growth in jobs and housing across the region.	2
	Cultural heritage: To contribute to the conservation and enhancement of the WHS by improving access both within and to the site	This option would remove the road and the sight and sound of associated road traffic noise from the entirety of the Stonehenge WHS, which is a substantial benefit for the Stonehenge WHS and the setting of Stonehenge and other Scheduled Monuments within the site, and the outstanding universal value of the WHS. The route option would also allow the reconnection of the Avenue. A scheduled monument of high importance and currently severed by the existing road. This option would allow the WHS to be reconnected whilst maintaining access for Non-Motorised Users (NMUs) to the existing A303 and improving visitor experience and access. There would be limited visibility of the option from the southern fringes of the Stonehenge WHS, and the setting of some designated assets would be slightly adversely affected. Overall, however, the option would result in a Large Beneficial effect on the WHS.	3

Document	Relevant objectives	Summary of impacts	Score
		This option would also relieve congestion and improve traffic conditions for users of the A303. It is likely that improvements in local traffic conditions would result in improvements in access to the site.	
	Environment and community: To contribute to the enhancement of the historic landscape within the WHS, to improve biodiversity along the route option, and to provide a positive legacy to communities adjoining the road	<p>In terms of the historic landscape, this option would remove the existing A303 and sight and sound of associated road traffic from the entirety of the Stonehenge WHS, protecting and enhancing the setting of Stonehenge and other Scheduled Monuments, and restoring the landscape and reconnecting features of high importance to the wider landscape that would substantially benefit the OUV of the Stonehenge WHS. There would be limited visibility of the option from the southern fringes of the Stonehenge WHS, and the setting of some designated assets would be slightly adversely affected. However these adverse effects would be outweighed by the scale of the benefit for the Stonehenge WHS contributing to a Large Beneficial effect on the WHS and improving biodiversity.</p> <p>In terms of biodiversity, however, this option would have the potential to impact directly and indirectly on a number of European and nationally designated sites, including the River Avon SAC and River Avon System SSSIs (which overlap with the River Avon SAC). The length of the route option also has the potential to result in significant loss of priority habitats and associated biodiversity.</p> <p>The impact of traffic in Winterbourne Stoke would be reduced: however, this option and the closure of the existing A303 between Countess and Longbarrow roundabouts would encourage traffic to divert on to local roads, increasing traffic flows through communities to the north of the A303, and resulting in adverse severance effects. It is therefore less clear than for options in Corridor D that this route option would resolve existing traffic issues in communities currently affected by 'rat running' such as Shrewton and Larkhill. There is also the potential for adverse severance effects for communities to the south of the existing A303 in the Avon and Till valleys. It is expected, however, that this option would result in a large net benefit in terms of reducing noise, due to the reduced noise impact of the existing A303 on Amesbury. There is also the potential for a net improvement in local air quality due to a reduction to exposure of concentrations of particulate matter, although there is an increase in NOx emissions across the scheme area. There would also be the potential for a range of slight to very large adverse impacts on landscape character, including very large adverse impacts on the Upper Avon Narrow Chalk River Valley and large adverse impacts on the Larkhill and Winterbourne Chalk Downland and Till Narrow Chalk River Valley Landscape Character Areas.</p>	2

Table 4 provides a summary assessment for all three route options against the detailed requirements which underpin the headline Client Scheme Requirements.

Table 4: Client Scheme Requirements

Headline CSRs		Detailed requirements	Summary assessment (all options)
Transport	To create a high quality route option that resolves current and predicted traffic problems and contributes towards the creation of an Expressway between London and the South West	The road will be designed to modern standards and, in addition, perform as an Expressway.	All route options can be designed to Expressway standard.
		The design of the road and connections with the local network will address issues of congestion, resilience and reliability. It will reduce risk of traffic diverting onto local roads.	The risk of traffic diverting onto local roads is less with Corridor D options than with option F010, which is further away from the current A303. This is discussed in further detail in the assessment tables for each route option.
		Road safety will be improved to at least the national average for a road of this type.	All route options can be designed to standards and meet national average safety indicators. Further information is provided in the assessment tables for each route option.
Economic Growth	In combination with other schemes on the route option, to enable growth in jobs and housing by providing a free flowing and reliable connection between the East and the South West peninsula	The road capacity, together with NMU provision, will be increased to dual carriageway all-purpose between Amesbury and Berwick Down, linking with existing dual carriageways to the east and west.	All-purpose Dual Carriageway (D2AP) and NMU provision will be made across all route options.
		Grade separated junctions will be introduced to create a road that meets Expressway standards, designed to accommodate foreseeable traffic growth.	Expressway standard will be achieved across all route options.
		Grade separation will also assist traffic and NMU wishing to cross the A303 and so stimulate local economic activity and reduce severance.	Connectivity across all route options can be achieved.
Cultural Heritage	To contribute to the conservation and enhancement of the WHS by improving access both within and to the site	The existing road will be downgraded as it passes through the Stonehenge WHS for use by NMUs and for access.	For Corridor D options, the existing road would be closed to through traffic except NMU between Longbarrow Roundabout and where the new route comes on line at surface level adjacent to Vespasian's Camp. This would reduce severance and consequently enhance access within the Stonehenge WHS.

Headline CSRs		Detailed requirements	Summary assessment (all options)
			<p>For option F010, the existing road would be closed to through traffic except NMU between Longbarrow Roundabout and Countess Roundabout. This would reduce severance, improve connectivity and consequently access within the Stonehenge WHS.</p>
		<p>The strategic route option will be redirected so as to reduce its impact on the WHS, both sight and sound. The redirected route option will treat archaeological features with sensitivity and will protect the OUV of the WHS. It will seek to minimise any damage to or loss of archaeology.</p>	<p>Corridor D options would remove the road and sight and sound of associated road traffic noise from a key part of the Stonehenge WHS, reducing severance within the Stonehenge WHS, providing a significant improvement for the setting of Stonehenge and other related monuments and the OUV of the WHS. The option would allow the reconnection of the Avenue, and would maintain access for NMUs to the existing A303 and improve visitor experience and access. These are very notable benefits that when balanced against the adverse effects resulting from the introduction of major new infrastructure into the WHS and the impacts on important assets and key attributes of the site's OUV, would result in a Slight/Moderate (D061) to Moderate (D062) Beneficial effect on the WHS.</p> <p>Option F010 would remove the road and the sight and sound of associated road traffic noise from the entirety of the Stonehenge WHS, which is a substantial benefit for the Stonehenge WHS and the setting of Stonehenge and other Scheduled Monuments within the site, and the OUV of the WHS. The route option would also allow the reconnection of the Avenue, allow the WHS to be reconnected whilst maintaining access for Non-Motorised Users (NMUs) to the existing A303, and improve visitor experience and access. There would be limited visibility of the option from the southern fringes of the Stonehenge WHS, and the setting of some designated assets would be slightly adversely affected. Overall, however, the option would result in a Large Beneficial effect on the WHS.</p> <p>The potential impact on the WHS is discussed in the assessment tables for each route option.</p>

Headline CSRs		Detailed requirements	Summary assessment (all options)
		Grade separated junctions will improve access onto and off the A303, with well-designed signing to access the WHS.	It is proposed that all side road junctions with the A303 will be grade separated with the location and layout to be confirmed in design development in the subsequent stages. This would include appropriate signage to access the Stonehenge WHS.
		Where the road passes through the WHS it will have an iconic identity and be of good design. As far as is practicable and without compromise to safety, the design will seek to accommodate the specific needs of the WHS.	Options in Corridor D present opportunities to address the needs of the Stonehenge WHS. However, these options would still require the construction of portals and lengths of dual carriageway at surface level, and the ability for the design to accommodate the specific needs of the Stonehenge WHS would depend on the route option chosen, location of portals, length of tunnel etc. Option F010 would include the closure of the existing A303, which has the potential to respond to the specific needs of the Stonehenge WHS. The specific needs of the WHS are discussed in further detail in the assessment tables for each route option.
		Learning opportunities associated with any excavation within the WHS will be realised, by working closely with key heritage stakeholders	Sensitive working practices and close collaboration with key heritage stakeholders will be adopted throughout the design process. Learning will be shared with key stakeholders and the public.
Environment and Community	To contribute to the enhancement of the historic landscape within the WHS, to improve biodiversity along the route option and to provide a positive legacy to communities adjoining the road	Land no longer forming the public highway within the WHS will be returned to the adjoining landowner. Where practicable and with the permission of the owner, it will be landscaped in accordance with the adjoining land.	Detailed landscaping will be informed by the environmental assessment and stakeholder consultation. For option F010, it is assumed that the existing road will be closed to through traffic except NMU.
		Biodiversity within new landscaping along the route option will ensure no net loss of biodiversity and an aspiration to net addition.	All route options have the potential to impact directly and indirectly on European and nationally designated sites, including the River Avon Special Area of Conservation (SAC) and River Avon SSSIs (which overlap with the River Avon SAC).

Headline CSRs		Detailed requirements	Summary assessment (all options)
			Benefits of options D061 and D062 would include a shorter scheme in terms of its length, landscape reconnection and habitat restoration, leading to a reduction in road fatalities and increase in wildlife movement relative to route option F010. The length of route option F010 has the potential to result in a major loss of habitat and biodiversity and these cannot be compensated within the scheme.
		The A303 will bypass Winterbourne Stoke and the existing road will be de-trunked as it passes through the village. This will improve the quality of life for the residents of the village.	The A303 will bypass Winterbourne Stoke and the existing road will be de-trunked as it passes through the village. This has the potential to reduce road traffic noise and severance in the village.
		Disruption to customers and local residents during the construction of the scheme will be minimised as much as is reasonably practicable. Also, opportunities for materials re-use will be sought as far as is practicable. Opportunities for mitigating impacts will be actively pursued in close consultation with communities.	There is the potential for disruption on roads and for settlements along and in proximity to all route options. The application of best practice construction techniques and detailed design will aim to minimise disruption to road users and local residents.
		Presentations will be given to local and regional forums to raise awareness of the scheme, its timing and the potential economic benefits likely to result from an improved road network, as well as employment and supply chain opportunities during construction. Learning and finds during the development of the scheme will be presented to local schools and communities.	Learning from all route options will be shared with key stakeholders and the public.
		The scheme will aspire to achieve a Civil Engineering Environmental Quality Assessment and Award Scheme (CEEQUAL) rating of excellent.	A project target of CEEQUAL 'excellent' will be sought across all route options.

Policy assessment tables

Table 5: Option D061 (tunnel and bypass north of Winterbourne Stoke, with eastern portal to the east of the Avenue)

Document	Relevant objectives	Summary of impacts	Score
National policy alignment			
National Policy Statement for National Networks (NPSNN)	Networks with the capacity and connectivity and resilience to support national and local economic activity and facilitate growth and create jobs	This option would increase capacity and reduce congestion on the A303, particularly at weekends and in the summer months. It would reduce average end-to-end journey times, thereby improving connectivity with the East and South East of England for strategic traffic. It would also improve traffic conditions in local towns and villages, supporting the local economy in South Wiltshire by improving accessibility to key sites along the A303 corridor such as Solstice Park business park. The route option – including the tunnel – would be designed and built to current standards, which would help to improve safety by providing a dual carriageway and managing junction access to maintain the flow of traffic. Increased capacity on the route option would improve resilience to accidents.	3
	Networks which support and improve journey quality, reliability and safety	This option would increase capacity on the A303, thereby reducing congestion and increasing reliability, particularly at weekends and in the summer months. It would reduce through traffic in Winterbourne Stoke, and it is likely that 'rat running' on local roads through communities such as Shrewton and Larkhill would also reduce, thereby reducing severance effects for local residents. The route option – including the tunnel – would be designed and built to current standards, which would help to improve safety by providing a dual carriageway and managing junction access to maintain the flow of traffic. It is estimated that this option would save about six accidents per year.	3
	Networks which support the delivery of environmental goals and the move to a low carbon economy	This option would result in an increase in carbon emissions, although this would be smaller over 60 years than for option F010. ¹ There is also the potential for a large adverse impact on the water environment due to dewatering required during construction. The route option has the potential to impact directly and indirectly on European and nationally designated sites, including the River Avon Special Area of Conservation (SAC) and River Avon SSSIs (which overlap with the River Avon SAC). Benefits of this route option in terms of biodiversity would include a shorter scheme in terms of its length, landscape reconnection and habitat restoration, leading to a reduction in road fatalities and increase in wildlife movement relative to route option F010. This option would result in a net beneficial impact on noise, and there is also the potential for a net improvement in local air quality due to a reduction to exposure of concentrations of particulate matter, although there is an increase in NOx emissions across the scheme area. While there are some benefits for the environment, alignment with this objective is considered to be weak overall due to the increase in carbon emissions.	1

¹ As part of the Stage 1 assessment, both definitions of Affected Road Network (ARN) were reviewed; due to the limitations of the regional changes in the current local model, the local ARN was used. It is recognised that not all changes in carbon emissions are captured with this approach, and this may skew the results of the emissions comparison, particularly during the early years of the scheme. This limitation will be appropriately addressed once the new regional model becomes available.

Document	Relevant objectives	Summary of impacts	Score
	Networks which join up our communities and link effectively to each other	This option would increase capacity on the A303, thereby reducing congestion and improving traffic conditions around Amesbury and in communities along the corridor, particularly at weekends and in the summer months. It would reduce through traffic in Winterbourne Stoke, and it is likely that 'rat running' on local roads through communities such as Shrewton and Larkhill would also reduce, thereby reducing severance effects for local residents. Provision of grade separated junctions with pedestrian crossing facilities would reduce the potential for the dualling of the existing alignment at Countess Roundabout to result in severance effects for residents of Countess Road.	3
Roads Investment Strategy: for the 2015/16 – 2019/2020 Road Period (RIS1)	Making the network safer	The improved A303 – including the tunnel – would be designed and built to current standards, which would help to improve safety by providing a dual carriageway and managing junction access to maintain the flow of traffic. It is estimated that this option would save about six accidents per year. It would also reduce through traffic in Winterbourne Stoke, and it is likely that 'rat running' on local roads through communities such as Shrewton and Larkhill would also reduce, thereby reducing severance effects for local residents.	3
	Improving user satisfaction	This option would increase capacity on the A303, thereby reducing congestion and increasing reliability, particularly at weekends and in the summer months. It would reduce through traffic in Winterbourne Stoke, and it is likely that 'rat running' on local roads through communities such as Shrewton and Larkhill would also reduce. This option would result in the loss of views of the Stonehenge WHS; overall, however, there would be a beneficial effect on journey quality due to the dualling of the route option and improvements to the condition of the road network.	3
	Supporting the smooth flow of traffic	This option would increase capacity on the A303, thereby reducing delays and disruption and improving journey times and journey time reliability along the route option. In 2031, the largest reduction in average end-to-end journey times would be approximately 8.5 minutes eastbound in the AM peak. In 2051, the largest reduction would be approximately 9.5 minutes, also eastbound in the AM peak. This would improve the corridor for strategic traffic. The route option would also reduce the impact of traffic in local towns and villages which could support improved accessibility to key sites.	3
	Encouraging economic growth by working to minimise delay	This option would support the South West regional economy by reducing average journey times and thereby improving connectivity with the East and South East of England for strategic traffic. It would also reduce the impact of traffic in local towns and villages, supporting the local economy in South Wiltshire by improving accessibility to key sites along the A303 corridor such as Solstice Park business park.	3
	Delivering better environmental outcomes	This option would result in a net beneficial impact on noise. The route option has the potential to impact directly and indirectly on European and nationally designated sites, including the River Avon SAC and River Avon System SSSIs (which overlap with the River Avon SAC). However, benefits of this route option in terms of biodiversity would include a shorter scheme in terms of its length, landscape reconnection and habitat restoration, leading to a reduction in road fatalities and increase in wildlife movement relative to route option F010. There is the potential for net improvement in local	2

Document	Relevant objectives	Summary of impacts	Score
		air quality due to a reduction to exposure of concentrations of particulate matter, although there is an increase in NOx emissions across the scheme area. This option would result in an increase in carbon emissions, although this would be smaller than for option F010.2 The KPIs which sit under this objective are to reduce the impact of noise and to improve biodiversity. Additional performance indicators are air quality, carbon dioxide and greenhouse gas emissions. Therefore alignment is considered to be moderate, despite the increase in carbon emissions.	
	Helping cyclists, pedestrians and other vulnerable users	This option would reduce through traffic in Winterbourne Stoke, and it is likely that 'rat running' through communities such as Shrewton and Larkhill would also reduce. It is estimated that this option would save about six accidents per year, which could have particular benefits for pedestrians and older people who are more likely than average to be involved in accidents in the area. Without mitigation, the route option would cause severance at nine Public Rights of Way (PRoW). However, it would reduce severance at approximately 18 PRoW, improving the experience for users of the PRoW network in the area. There would be access for Non-Motorised Users (NMUs) to the existing A303	3
Local policy alignment			
Wiltshire Core Strategy	Strategic Objective 1: Delivering a thriving economy	This option would support the South West regional economy by reducing average journey times and thereby improving connectivity with the East and South East of England for strategic traffic. It could also reduce the impact of traffic in local towns and villages, supporting the local economy in South Wiltshire by improving accessibility to key sites along the A303 corridor, such as Solstice Park business park. In terms of supporting the tourism sector in Wiltshire, it would reduce severance within the Stonehenge WHS, improving access for visitors and potentially enhancing the visitor experience.	3
	Strategic Objective 4: Helping to build resilient communities	This option would increase capacity on the A303, thereby reducing congestion and improving traffic conditions around Amesbury and in communities along the route option, particularly at weekends and in the summer months. It would reduce through traffic in Winterbourne Stoke, and it is likely that 'rat running' on local roads through communities such as Shrewton and Larkhill would also reduce, thereby reducing severance effects for local residents. Increased capacity on the route option would improve resilience to accidents, and the route option – including the tunnel – would be designed and built to current standards, which would help to improve safety by providing a dual carriageway and managing junction access to maintain the flow of traffic. It is estimated that this option would save about six accidents per year.	3
	Strategic Objective 5: Protecting and enhancing the natural,	The route option would have the potential to impact directly and indirectly on a number of European and nationally designated sites, including the Salisbury Plain SPA, Parsonage Down SSSI and NNR, River Avon SAC (that include the River Till) and River Avon System SSSIs (that overlap with the River	2

² As part of the Stage 1 assessment, both definitions of Affected Road Network (ARN) were reviewed; due to the limitations of the regional changes in the current local model, the local ARN was used. It is recognised that not all changes in carbon emissions are captured with this approach, and this may skew the results of the emissions comparison, particularly during the early years of the scheme. This limitation will be appropriately addressed once the new regional model becomes available.

Document	Relevant objectives	Summary of impacts	Score
	historic and built environment	<p>Avon SAC). However, benefits of this route option in terms of biodiversity would include a shorter scheme in terms of its length, landscape reconnection and habitat restoration, leading to a reduction in road fatalities and increase in wildlife movement relative to route option F010. There would be a range of slight to moderate adverse impact on landscape character – including moderate adverse effects on the Larkhill and Winterbourne Chalk Downland, Till Narrow Chalk River Valley, and Tilshead Chalk Downland Landscape Character Areas. There would be a slight beneficial impact on tranquillity and cultural aspects for parts of the Larkhill Chalk Downland to the east of the A360. There is the potential for net improvement in local air quality due to a reduction to exposure of concentrations of particulate matter, although there is an increase in NOx emissions across the scheme area. There is the potential for large adverse impacts on the water environment due to potential dewatering during construction.</p> <p>In terms of the historic and built environment, the tunnel would remove the road from a key part of the Stonehenge WHS, providing a significant improvement for the setting of Stonehenge and other related monuments. It would also reconnect the Avenue. These are very notable benefits. However, the route options would introduce major new infrastructure into the WHS, adversely affecting important assets and key attributes of the site's OUV, e.g. the location of the western portal relative to Normanton Barrow Group. On balance and in terms of the WHS, the impacts are considered positive, resulting in a Slight / Moderate Beneficial effect. In terms of the historic environment as a whole (i.e. both within and outside the WHS), the route option would have an impact on the settings of many scheduled monuments within and around the WHS which would benefit from the removal of the existing A303. The construction of the new route would have adverse impacts on the setting of many other scheduled monuments and the fabric of one monument and areas of non-designated archaeology. This would result in a greater number of adverse effects than beneficial effects. Additionally, there would be adverse impacts on a number of listed buildings, a conservation area and a registered park and garden; resulting in adverse effects on these environmental resources.</p> <p>Although there are a greater number of adverse effects, national policy requires considerable weight to be given to impacts on the highest value assets e.g. the WHS, Stonehenge and the Avenue. Consequently, when balancing impacts on the historic environment a neutral balance has been recorded to reflect this weighting.</p>	
	Strategic Objective 6: Ensuring that adequate infrastructure is in place to support our communities	<p>This option would increase capacity on the A303, thereby reducing delays and disruption and improving journey times and journey time reliability along the route option, particularly at weekends and in the summer months. As well as improving the corridor for strategic journeys, it would reduce the impact of traffic in local towns and villages. Increasing capacity on the road would improve traffic conditions around Amesbury, reduce through traffic in Winterbourne Stoke, and reduce 'rat running' on local roads through communities such as Shrewton and Larkhill. This would reduce the severance effect of traffic through these settlements. The route option – including the tunnel – would be designed and built to current standards, which would help to improve safety for all road users. This option</p>	2

Document	Relevant objectives	Summary of impacts	Score
		would, however, result in an increase in carbon emissions, although this would be smaller than for option F010. ³	
	Core Policy 4: Spatial strategy for the Amesbury Community Area	This option would increase capacity, thereby reducing congestion and improving traffic conditions around Amesbury, particularly at weekends and in the summer months. This would have the potential to improve access to key sites in the area such as Solstice Park business park, which could make these sites more attractive for potential developers and occupiers.	2
	Core Policy 6: Stonehenge	A tunnel would remove the road and associated traffic noise from a key part of the Stonehenge WHS, providing a significant improvement for the setting of Stonehenge and other related monuments (this is discussed in more detail under Core Policy 59 below). As well as protecting the Outstanding Universal Value (OUV) of the site, this policy also sets out criteria for new visitor facilities at Stonehenge, including the setting of Stonehenge, the visitor experience, and environmentally sensitive methods of managing visitors to and from the site. This option would support the policy by reducing severance within the Stonehenge WHS, improving access for visitors, enhancing the setting of the monument and potentially improving the visitor experience.	2
	Core Policy 59: The Stonehenge, Avebury and Associated Sites WHS and its setting	A tunnel would remove the existing A303 and the sight and sound of associated road traffic noise from a key part of the Stonehenge WHS. This option would reduce severance within the Stonehenge WHS, providing a significant improvement on the setting of Stonehenge and other related monuments, and the outstanding universal value of the WHS. The eastern tunnel portal would also be to the east of the Avenue, a scheduled monument of high importance and currently severed by the existing road. This option would allow the WHS to be reconnected whilst maintaining access for Non-Motorised Users (NMUs) to the existing A303 and improving visitor experience and access. These are very notable benefits that when balanced against the adverse effects resulting from the introduction of major new infrastructure into the WHS and the impacts on important assets and key attributes of the site's OUV, would result in a Slight/Moderate Beneficial effect on the WHS.	2
Wiltshire Local Transport Plan	Support economic growth	This option would increase capacity on the A303, thereby reducing delays and disruption and improving journey times and journey time reliability along the route option. In 2031, the largest reduction in average end-to-end journey times would be approximately 8.5 minutes eastbound in the AM peak. In 2051, the largest reduction would be approximately 9.5 minutes, also eastbound in the AM peak. Increased capacity on the route option would improve resilience to accidents, and the route option – including the tunnel – would be designed and built to current standards, which would help to improve safety by providing a dual carriageway and managing junction access to maintain the flow of traffic. This would improve the corridor for strategic traffic such as freight, and would support the South West regional economy by improving connectivity with the East and South East of England. It	3

³ As part of the Stage 1 assessment, both definitions of Affected Road Network (ARN) were reviewed; due to the limitations of the regional changes in the current local model, the local ARN was used. It is recognised that not all changes in carbon emissions are captured with this approach, and this may skew the results of the emissions comparison, particularly during the early years of the scheme. This limitation will be appropriately addressed once the new regional model becomes available.

Document	Relevant objectives	Summary of impacts	Score
		could also reduce the impact of traffic in local towns and villages, supporting the local economy in South Wiltshire by improving accessibility to key sites along the A303 corridor such as Solstice Park.	
	Reduce carbon emissions	All of the options assessed would result in an increase in carbon emissions compared with the existing A303. Route options in Corridor D are predicted to result in lower estimated increase in CO2 emissions than option F010, as these options are shorter and would result in larger journey time savings and therefore lower user emissions. ⁴	1
	Contribute to better safety, security and health	This option would reduce through traffic in Winterbourne Stoke, and it is likely that 'rat running' on local roads through communities such as Shrewton and Larkhill would also reduce, thereby reducing severance effects for local residents. Without mitigation, the route option would cause severance at nine Public Rights of Way (PRoW). However, it would reduce severance at approximately 18 PRoW, improving the experience for users of the PRoW network in the area. There would also be access for Non-Motorised Users (NMUs) to the existing A303. The route option – including the tunnel – would be designed and built to current standards, which would help to improve safety by providing a dual carriageway and managing junction access to maintain the flow of traffic. It is estimated that this option would save about six accidents per year.	3
	Promote equality of opportunity	<p>The improved A303 – including the tunnel – would be designed and built to current standards, which would help to improve safety by providing a dual carriageway and managing junction access to maintain the flow of traffic. It is estimated that this option would save about six accidents per year, which could have particular benefits for pedestrians and older people who are more likely than average to be involved in accidents in the area. It is expected that there would be a beneficial effect on traveller stress, due to improved safety, reduced traveller frustration, and reduced fear of accident. The route option would result in a marginal increase in travel distances and a negligible impact on local users.</p> <p>Without mitigation, the route option would cause severance at nine Public Rights of Way (PRoW). However, it would reduce severance at approximately 18 PRoW, improving the experience for users of the PRoW network in the area. There would be access for Non-Motorised Users (NMUs) to the existing A303. The route option would also reduce through traffic in Winterbourne Stoke, and it is likely that 'rat running' on local roads through communities such as Shrewton and Larkhill would also reduce, thereby reducing severance effects for local residents. Provision of grade separated junctions with pedestrian crossing facilities would reduce the potential for the dualling of the existing alignment at Countess Roundabout to result in severance effects for residents of Countess Road. There are concentrations of older people and children in Durrington and Larkhill, and of older people between</p>	2

⁴ As part of the Stage 1 assessment, both definitions of Affected Road Network (ARN) were reviewed; due to the limitations of the regional changes in the current local model, the local ARN was used. It is recognised that not all changes in carbon emissions are captured with this approach, and this may skew the results of the emissions comparison, particularly during the early years of the scheme. This limitation will be appropriately addressed once the new regional model becomes available.

Document	Relevant objectives	Summary of impacts	Score
	<p>Improve quality of life and promote a healthy natural environment</p>	<p>Berwick St James and Winterbourne Stoke and around Countess Roundabout, and so any reduction in severance could have particular benefits for these groups.</p> <p>This option would increase capacity on the A303, thereby reducing congestion, increasing reliability, and improving the journey experience for users of the route option, particularly at weekends and in the summer months. It would reduce through traffic in Winterbourne Stoke, and it is likely that 'rat running' on local roads through communities such as Shrewton and Larkhill would also reduce, thereby reducing the impact on residents' quality of life and the built environment in these communities. There is the potential for a net improvement in local air quality due to a reduction to exposure of concentrations of particulate matter, although there is an increase in NOx emissions across the scheme area. There would be a net beneficial effect in terms of noise. There would be a range of slight to moderate adverse impact on landscape designations and landscape character – including moderate adverse impacts on the Larkhill and Winterbourne Chalk Downland, Till Narrow Chalk River Valley, and Tilshead Chalk Downland Landscape Character Areas – and the potential for adverse impacts on the water environment. Without mitigation, the route option would cause severance at nine Public Rights of Way (PRoW). However, it would reduce severance at approximately 18 PRoW, improving the experience for users of the PRoW network in the area. There would also be access for Non-Motorised Users (NMUs) to the existing A303. This option would result in the loss of views of the Stonehenge WHS; overall, however, there would be a beneficial effect on journey quality due to the dualling of the route option and improvements to the condition of the road network.</p>	2
WHS Management Plan	<p>Aim 3: Sustain the OUV of the Stonehenge WHS through the conservation and enhancement of the Site and its attributes of OUV</p>	<p>A tunnel would remove the road and site and sound of associated traffic from a key part of the Stonehenge WHS, providing a significant improvement for the setting of Stonehenge and other related monuments. The location of the eastern tunnel portal would allow the reconnection of the Avenue. However, construction of the route option would have very severe impacts on the setting of a large number of Scheduled Monuments within the Stonehenge WHS, and the fabric of one monument and areas of non-designated archaeology. Overall, it is considered that this option would result in a Slight/Moderate Beneficial impact on the WHS.</p>	2
	<p>Aim 6: Reduce significantly the negative impacts of roads and traffic on the Stonehenge WHS and its attributes of OUV and increase sustainable access to the Stonehenge WHS.</p>	<p>This option would remove the road and site and sound of associated traffic from part of the Stonehenge WHS, providing a significant improvement and reducing the impacts on the setting of Stonehenge and other related monuments. It would also reconnect the Avenue. These are very notable benefits. However, the route options would introduce major new infrastructure into the WHS adversely affecting important assets and key attributes of the site's OUV, e.g. the location of the western portal relative to Normanton Barrow Group.</p> <p>Regarding sustainable access, it would also reduce severance within the Stonehenge WHS, improving access for visitors, including those living in communities surrounding the Stonehenge WHS.</p>	2

Document	Relevant objectives	Summary of impacts	Score
Swindon and Wiltshire Local Enterprise Partnership (LEP), Strategic Economic Plan	Transport infrastructure improvements: We need a well-connected, reliable and resilient transport system to support economic and planned development growth at key locations	This option would increase capacity on the A303, thereby reducing delays and disruption and improving journey times and journey time reliability along the route option. In 2031, the largest reduction in average end-to-end journey times would be approximately 8.5 minutes eastbound in the AM peak. In 2051, the largest reduction would be approximately 9.5 minutes, also eastbound in the AM peak. Increased capacity on the route option would improve resilience to accidents, and the route option – including the tunnel – would be designed and built to current standards, which would help to improve safety by providing a dual carriageway and managing junction access to maintain the flow of traffic. This would improve the corridor for strategic traffic such as freight, and would support the South West regional economy by improving connectivity with the East and South East of England. It would also reduce the impact of traffic in local towns and villages, potentially supporting planned development in South Wiltshire by improving accessibility to key sites along the A303 corridor such as Solstice Park.	3
	Place-shaping: We need to deliver the infrastructure required to deliver our planned growth and regenerate our City and Town Centres, and improve our visitor and cultural offer	In terms of improving the visitor and cultural offer, a tunnel would remove the road and associated road traffic noise from key parts of the Stonehenge WHS, protecting and enhancing the setting of Stonehenge and other related monuments. The route option would allow the reconnection of the Avenue, improving access for visitors and enhancing the visitor experience. The route option would also increase capacity on the A303, thereby reducing delays and disruption and improving journey times and journey time reliability along the route option. In 2031, the largest reduction in average end-to-end journey times would be approximately 8.5 minutes eastbound in the AM peak. In 2051, the largest reduction would be approximately 9.5 minutes, also eastbound in the AM peak. This could have the potential to improve perceptions of the area, and play a role in supporting the visitor economy of Wiltshire and the wider South West region by attracting more repeat visitors. Improved connectivity between the South West and the East and South East of England would also be likely to benefit the economy more widely, by improving conditions for freight and other strategic traffic. It is possible that this could contribute towards making the region more attractive for potential developers.	3

Table 6: Option D062 (tunnel and bypass south of Winterbourne Stoke, with eastern tunnel portal east of the Avenue)

Document	Relevant objectives	Summary of impacts	Score
National policy alignment			
NPSNN	Networks with the capacity and connectivity and resilience to support national and local	This option would increase capacity and reduce congestion on the A303, particularly at weekends and in the summer months. It would reduce average end-to-end journey times, thereby improving connectivity with the East and South East of England for strategic traffic. It would also improve traffic conditions in local towns and villages, supporting the local economy in South Wiltshire by improving	3

Document	Relevant objectives	Summary of impacts	Score
	economic activity and facilitate growth and create jobs	accessibility to key sites along the A303 corridor such as Solstice Park business park. The route option – including the tunnel – would be designed and built to current standards, which would help to improve safety by providing a dual carriageway and managing junction access to maintain the flow of traffic. Increased capacity on the route option would improve resilience to accidents.	
	Networks which support and improve journey quality, reliability and safety	This option would increase capacity on the A303, thereby reducing congestion and increasing reliability, particularly at weekends and in the summer months. It would reduce through traffic in Winterbourne Stoke, and it is likely that 'rat running' on local roads through communities such as Shrewton and Larkhill would also reduce. The route option – including the tunnel – would be designed and built to current standards, which would help to improve safety by providing a dual carriageway and managing junction access to maintain the flow of traffic. It is estimated that this option would save about six accidents per year.	3
	Networks which support the delivery of environmental goals and the move to a low carbon economy	This option would result in an increase in carbon emissions, although this would be smaller over 60 years than for option F010. ⁵ There is also the potential for a large adverse impact on the water environment due to dewatering required during construction. The route option has the potential to impact directly and indirectly on a number of European and nationally designated sites, including the River Avon SAC and River Avon System SSSIs (which overlap with the River Avon SAC). Benefits of this route option in terms of biodiversity would include a shorter scheme in terms of its length, landscape reconnection and habitat restoration, leading to a reduction in road fatalities and increase in wildlife movement relative to route option F010. This option would result in a net beneficial effect on noise, and there is also the potential for a net improvement in local air quality due to a reduction to exposure of concentrations of particulate matter, although there is an increase in NOx emissions across the scheme area. While there are some benefits for the environment, alignment with this objective is considered to be weak overall due to the increase in carbon emissions.	1
	Networks which join up our communities and link effectively to each other	This option would increase capacity on the A303, thereby reducing congestion and improving traffic conditions around Amesbury and in communities along the route option, particularly at weekends and in the summer months. It would reduce through traffic in Winterbourne Stoke, and it is likely that 'rat running' on local roads through communities such as Shrewton and Larkhill would also reduce, thereby reducing severance effects for local residents. Provision of grade separated junctions with pedestrian crossing facilities reduce the potential for the dualling of the existing alignment at Countess Roundabout to result in severance effects for residents of Countess Road.	3
RIS1	Making the network safer	This option would increase capacity on the route option, improving resilience to accidents. The route option – including the tunnel – would be designed and built to current standards, which would help to improve safety by providing a dual carriageway and managing junction access to maintain the flow of	3

⁵ As part of the Stage 1 assessment, both definitions of Affected Road Network (ARN) were reviewed; due to the limitations of the regional changes in the current local model, the local ARN was used. It is recognised that not all changes in carbon emissions are captured with this approach, and this may skew the results of the emissions comparison, particularly during the early years of the scheme. This limitation will be appropriately addressed once the new regional model becomes available.

Document	Relevant objectives	Summary of impacts	Score
		traffic. It is estimated that this option would save about six accidents per year. It would also reduce through traffic in Winterbourne Stoke, and it is likely that 'rat running' on local roads through communities such as Shrewton and Larkhill would also reduce, thereby reducing severance effects for local residents.	
	Improving user satisfaction	This option would increase capacity on the A303, thereby reducing congestion and increasing reliability, particularly at weekends and in the summer months. It would reduce through traffic in Winterbourne Stoke, and it is likely that 'rat running' on local roads through communities such as Shrewton and Larkhill would also reduce. This option would result in the loss of views of the Stonehenge WHS; overall, however, there would be a beneficial effect on journey quality due to the dualling of the route option and improvements to the condition of the road network.	3
	Supporting the smooth flow of traffic	This option would increase capacity on the A303, thereby reducing delays and disruption and improving journey times and journey time reliability along the route option. In 2031, the largest reduction in average end-to-end journey times would be approximately 8.5 minutes eastbound in the AM peak. In 2051, the largest reduction would be approximately 9.5 minutes, also eastbound in the AM peak. This would improve the corridor for strategic traffic. The route option would also reduce the impact of traffic in local towns and villages, which could support improved accessibility to key sites.	3
	Encouraging economic growth by working to minimise delay	This option would support the South West regional economy by reducing average journey times and thereby improving connectivity with the East and South East of England for strategic traffic. It would also reduce the impact of traffic in local towns and villages, supporting the local economy in South Wiltshire by improving accessibility to sites including the Stonehenge WHS and Solstice Park business park.	3
	Delivering better environmental outcomes	This option would result in a net beneficial effect on noise. The route option has the potential to impact directly and indirectly on a number of European and nationally designated sites, including the River Avon SAC and River Avon System SSSIs (which overlap with the River Avon SAC). However, benefits of this route option in terms of biodiversity would include a shorter scheme in terms of its length, landscape reconnection and habitat restoration, leading to a reduction in road fatalities and increase in wildlife movement relative to route option F010. There is also the potential for net improvement in local air quality due to a reduction to exposure of concentrations of particulate matter, although there is an increase in NOx emissions across the scheme area. This option would result in an increase in carbon emissions, although this would be smaller than for option F010. ⁶ The KPIs which sit under this objective are to reduce the impact of noise and to improve biodiversity. Additional performance	2

⁶ As part of the Stage 1 assessment, both definitions of Affected Road Network (ARN) were reviewed; due to the limitations of the regional changes in the current local model, the local ARN was used. It is recognised that not all changes in carbon emissions are captured with this approach, and this may skew the results of the emissions comparison, particularly during the early years of the scheme. This limitation will be appropriately addressed once the new regional model becomes available.

Document	Relevant objectives	Summary of impacts	Score
		indicators are air quality, carbon dioxide and greenhouse gas emissions. Therefore alignment is considered to be moderate, despite the increase in carbon emissions.	
	Helping cyclists, pedestrians and other vulnerable users	This option would reduce through traffic in Winterbourne Stoke, and it is likely that 'rat running' through communities such as Shrewton and Larkhill would also reduce. It is estimated that this option would save about six accidents per year, which could have particular benefits for pedestrians and older people who are more likely than average to be involved in accidents in the area. Without mitigation, the route option would cause severance at 10 PRow. However, it would reduce severance at approximately 18 PRow, improving the experience for users of the PRow network in the area, and there would be access for NMUs to the existing A303.	3
Local policy alignment			
Wiltshire Core Strategy	Strategic Objective 1: Delivering a thriving economy	This option would support the South West regional economy by reducing average journey times and thereby improving connectivity with the East and South East of England for strategic traffic. It would also reduce the impact of traffic in local towns and villages, supporting the local economy in South Wiltshire by improving accessibility to key sites along the A303 corridor, such as Solstice Park business park. In terms of supporting the tourism sector in Wiltshire, it would reduce severance within the Stonehenge WHS, improving access for visitors and potentially enhancing the visitor experience.	3
	Strategic Objective 4: Helping to build resilient communities	This option would increase capacity on the A303, thereby reducing congestion and improving traffic conditions around Amesbury and in communities along the route option, particularly at weekends and in the summer months. It would reduce through traffic in Winterbourne Stoke, and it is likely that 'rat running' on local roads through communities such as Shrewton and Larkhill would also reduce, thereby reducing severance effects for local residents. Increased capacity on the route option would improve resilience to accidents, and the route option – including the tunnel – would be designed and built to current standards, which would help to improve safety by providing a dual carriageway and managing junction access to maintain the flow of traffic. It is estimated that this option would save about six accidents per year.	3
	Strategic Objective 5: Protecting and enhancing the natural, historic and built environment	The route option has the potential to impact directly and indirectly on a number of European and nationally designated sites, including the River Avon SAC and River Avon System SSSIs (which overlap with the River Avon SAC). However, benefits of this route option in terms of biodiversity would include a shorter scheme in terms of its length, landscape reconnection and habitat restoration, leading to a reduction in road fatalities and increase in wildlife movement relative to route option F010. There would be a range of slight to moderate adverse impacts on landscape character – including moderate adverse impacts on the Larkhill and Winterbourne Chalk Downland, Till Narrow Chalk River Valley, and Tilshead Chalk Downland Landscape Character Areas. There would be a slight beneficial impact on tranquillity and cultural aspects for parts of the Larkhill Chalk Downland to the east of the A360. There is the potential for net improvement in local air quality due to a reduction to exposure of	2

Document	Relevant objectives	Summary of impacts	Score
		<p>concentrations of particulate matter, although there is an increase in NOx emissions across the scheme area. There is also the potential for large adverse impacts on the water environment.</p> <p>In terms of the historic and built environment, the tunnel would remove the road from a key part of the Stonehenge WHS, providing a significant improvement for the setting of Stonehenge and other related monuments. It would also reconnect the Avenue. These are very notable benefits. However, the route options would introduce major new infrastructure into the WHS, adversely affecting important assets and key attributes of the site's OUV, e.g. the location of the western portal relative to Normanton Barrow Group. On balance and in terms of the WHS, the impacts are considered positive, resulting in a Moderate Beneficial effect. In terms of the historic environment as a whole (i.e. both within and outside the WHS), the route option would have an impact on the settings of many scheduled monuments within and around the WHS which would benefit from the removal of the existing A303. The construction of the new route would have adverse impacts on the setting of many other scheduled monuments and the fabric of one monument and numerous areas of non-designated archaeology. This would result in a greater number of adverse effects than beneficial effects. Additionally, there would be adverse impacts on a number of listed buildings, a conservation area and a registered park and garden; resulting in adverse effects on these environmental resources. Although there are a greater number of adverse effects, national policy requires considerable weight to be given to impacts on the highest value assets e.g. the WHS, Stonehenge and the Avenue. Consequently, when balancing impacts on the historic environment a neutral balance has been recorded to reflect this weighting.</p>	
	Strategic Objective 6: Ensuring that adequate infrastructure is in place to support our communities	This option would increase capacity on the A303, thereby reducing delays and disruption and improving journey times and journey time reliability along the route option, particularly at weekends and in the summer months. As well as improving the corridor for strategic journeys, it would reduce the impact of traffic in local towns and villages. Increasing capacity on the road would improve traffic conditions around Amesbury, reduce through traffic in Winterbourne Stoke, and reduce 'rat running' on local roads through communities such as Shrewton and Larkhill. This would reduce the severance effect of traffic through these settlements. The route option – including the tunnel – would be designed and built to current standards, which would help to improve safety for all road users. This option would, however, result in an increase in carbon emissions, although this would be smaller than for option F010. ⁷	2
	Core Policy 4: Spatial strategy for the	This option would increase capacity, thereby reducing congestion and improving traffic conditions around Amesbury, particularly at weekends and in the summer months. This would have the potential	2

⁷ As part of the Stage 1 assessment, both definitions of Affected Road Network (ARN) were reviewed; due to the limitations of the regional changes in the current local model, the local ARN was used. It is recognised that not all changes in carbon emissions are captured with this approach, and this may skew the results of the emissions comparison, particularly during the early years of the scheme. This limitation will be appropriately addressed once the new regional model becomes available.

Document	Relevant objectives	Summary of impacts	Score
	Amesbury Community Area	to improve access to key sites in the area such as Solstice Park business park, which could make these sites more attractive for potential developers and occupiers.	
	Core Policy 6: Stonehenge	A tunnel would remove the road and associated traffic noise from a key part of the Stonehenge WHS, providing a significant improvement for the setting of Stonehenge and other related monuments (this is discussed in more detail under Core Policy 59 below). As well as protecting the OUV of the site, this policy also sets out criteria for new visitor facilities at Stonehenge, including the setting of Stonehenge, the visitor experience, and environmentally sensitive methods of managing visitors to and from the site. This option would support the policy by reducing severance within the Stonehenge WHS, improving access for visitors, enhancing the setting of the monument and potentially improving the visitor experience.	2
	Core Policy 59: The Stonehenge, Avebury and Associated Sites WHS and its setting	A tunnel would remove the existing A303 and the sight and sound of associated road traffic noise from a key part of the Stonehenge WHS. This option would reduce severance within the Stonehenge WHS, providing a significant improvement on the setting of Stonehenge and other related monuments, and the outstanding universal value of the WHS. The eastern tunnel portal would also be to the east of the Avenue, a scheduled monument of high importance and currently severed by the existing road. This option would allow the WHS to be reconnected whilst maintaining access for Non-Motorised Users (NMUs) to the existing A303 and improving visitor experience and access. These are very notable benefits that when balanced against the adverse effects resulting from the introduction of major new infrastructure into the WHS and the impacts on important assets and key attributes of the site's OUV, would result in a Moderate Beneficial effect on the WHS.	2
Wiltshire Local Transport Plan	Support economic growth	This option would increase capacity on the A303, thereby reducing delays and disruption and improving journey times and journey time reliability along the route option. In 2031, the largest reduction in average end-to-end journey times would be approximately 8.5 minutes eastbound in the AM peak. In 2051, the largest reduction would be approximately 9.5 minutes, also eastbound in the AM peak. Increased capacity on the route option would improve resilience to accidents, and the route option – including the tunnel – would be designed and built to current standards, which would help to improve safety by providing a dual carriageway and managing junction access to maintain the flow of traffic. This would improve the corridor for strategic traffic such as freight, and would support the South West regional economy by improving connectivity with the East and South East of England. It would also reduce the impact of traffic in local towns and villages, supporting the local economy in South Wiltshire by improving accessibility to key sites.	3
	Reduce carbon emissions	All of the options assessed would result in an increase in carbon emissions compared with the existing A303. Route options in Corridor D are predicted to result in lower estimated increases in CO2	1

Document	Relevant objectives	Summary of impacts	Score
		emissions than option F010, as these options are shorter and would result in larger journey time savings and therefore lower user emissions. ⁸	
	Contribute to better safety, security and health	This option would reduce through traffic in Winterbourne Stoke, and it is likely that 'rat running' on local roads through communities such as Shrewton and Larkhill would also reduce, thereby reducing severance effects for local residents. Without mitigation, the route option would cause severance at 10 PRow. However, it would reduce severance at approximately 18 PRow, improving the experience for users of the PRow network in the area. There would also be access for NMUs to the existing A303. The route option – including the tunnel – would be designed and built to current standards, which would help to improve safety by providing a dual carriageway and managing junction access to maintain the flow of traffic. It is estimated that this option would save about six accidents per year.	3
	Promote equality of opportunity	<p>The improved A303 – including the tunnel – would be designed and built to current standards, which would help to improve safety by providing a dual carriageway and managing junction access to maintain the flow of traffic. It is estimated that this option would save about six accidents per year, which could have particular benefits for pedestrians and older people who are more likely than average to be involved in accidents in the area. It is expected that there would be a beneficial effect on traveller stress, due to improved safety, reduced traveller frustration, and reduced fear of accidents. The route option would result in a marginal increase in travel distances and a negligible impact on local users.</p> <p>Without mitigation, the route option would cause severance at 10 Public Rights of Way (PRow). However, it would reduce severance at approximately 18 PRow, improving the experience for users of the PRow network in the area. There would be access for Non-Motorised Users (NMUs) to the existing A303. The route option would also reduce through traffic in Winterbourne Stoke, and it is likely that 'rat running' on local roads through communities such as Shrewton and Larkhill would also reduce, thereby reducing severance effects for local residents. Provision of grade separated junctions with pedestrian crossing facilities would reduce the potential for the dualling of the existing alignment at Countess Roundabout to result in severance effects for residents of Countess Road. There are concentrations of older people and children in Durrington and Larkhill, and of older people between Berwick St James and Winterbourne Stoke and around Countess Roundabout, and so any reduction in severance could have particular benefits for these groups.</p>	2
	Improve quality of life and promote a healthy natural environment	This option would increase capacity on the A303, thereby reducing congestion, increasing reliability, and improving the journey experience for users of the route option, particularly at weekends and in the summer months. It would reduce through traffic in Winterbourne Stoke, and it is likely that 'rat running'	2

⁸ As part of the Stage 1 assessment, both definitions of Affected Road Network (ARN) were reviewed; due to the limitations of the regional changes in the current local model, the local ARN was used. It is recognised that not all changes in carbon emissions are captured with this approach, and this may skew the results of the emissions comparison, particularly during the early years of the scheme. This limitation will be appropriately addressed once the new regional model becomes available.

Document	Relevant objectives	Summary of impacts	Score
		<p>on local roads through communities such as Shrewton and Larkhill would also reduce, thereby reducing the impact on residents' quality of life and the built environment in these communities. There is the potential for a net improvement in local air quality due to a reduction to exposure of concentrations of particulate matter, although there is an increase in NOx emissions across the scheme area. There would also be a net beneficial effect in terms of noise. There would be a range of slight to moderate adverse impact on landscape character – including moderate adverse impacts on the Larkhill and Winterbourne Chalk Downland, Till Narrow Chalk River Valley, and Tilshead Chalk Downland Landscape Character Areas. There would be a slight beneficial impact on tranquillity and cultural aspects for parts of the Larkhill Chalk Downland to the east of the A360. The route option has the potential to impact directly and indirectly on European and nationally designated sites, including the River Avon SAC and River Avon System SSSIs (which overlap with the River Avon SAC). However, benefits of this route option in terms of biodiversity would include a shorter scheme in terms of its length, landscape reconnection and habitat restoration, leading to a reduction in road fatalities and increase in wildlife movement relative to route option F010. Without mitigation, the route option would cause severance at 10 Public Rights of Way (PRoW). However, it would reduce severance at approximately 18 PRoW, improving the experience for users of the PRoW network in the area. There would also be access for Non-Motorised Users (NMUs) to the existing A303. This option would result in the loss of views of the Stonehenge WHS; overall, however, there would be a beneficial effect on journey quality due to the dualling of the route option and improvements to the condition of the road network.</p>	
WHS Management Plan	Aim 3: Sustain the OUV of the Stonehenge WHS through the conservation and enhancement of the Site and its attributes of OUV	<p>A tunnel would remove the road and site and sound of associated traffic from a key part of the Stonehenge WHS, providing a significant improvement for the setting of Stonehenge and other related monuments. The location of the eastern tunnel portal would allow the reconnection of the Avenue. However, construction of the route option would have adverse impacts on the setting of a large number of Scheduled Monuments within the Stonehenge WHS, and the fabric of one monument and areas of non-designated archaeology. There are particular issues associated with portal location close to the Normanton Down Barrow Group. Overall, it is considered that this option would result in a Moderate beneficial impact on the WHS.</p>	2
	Aim 6: Reduce significantly the negative impacts of roads and traffic on the Stonehenge WHS and its attributes of OUV and increase sustainable access to the Stonehenge WHS.	<p>This option would remove the road and site and sound of associated traffic from part of the Stonehenge WHS, providing a significant improvement and reducing the impacts on the setting of Stonehenge and other related monuments. It would also reconnect the Avenue. These are very notable benefits. However, the route options would introduce major new infrastructure into the WHS adversely affecting important assets and key attributes of the site's OUV, e.g. the location of the western portal relative to Normanton Barrow Group.</p> <p>Regarding sustainable access, it would also reduce severance within the Stonehenge WHS, improving access for visitors, including those living in communities surrounding the Stonehenge WHS.</p>	2

Document	Relevant objectives	Summary of impacts	Score
Swindon and Wiltshire LEP, Strategic Economic Plan	Transport infrastructure improvements: We need a well-connected, reliable and resilient transport system to support economic and planned development growth at key locations	This option would increase capacity on the A303, thereby reducing delays and disruption and improving journey times and journey time reliability along the route option. In 2031, the largest reduction in average end-to-end journey times would be approximately 8.5 minutes eastbound in the AM peak. In 2051, the largest reduction would be approximately 9.5 minutes, also eastbound in the AM peak. This would improve the corridor for strategic traffic such as freight, and would support the South West regional economy by improving connectivity with the East and South East of England. Increased capacity on the route option would improve resilience to accidents, and the route option – including the tunnel – would be designed and built to current standards, which would help to improve safety by providing a dual carriageway and managing junction access to maintain the flow of traffic. It would also reduce the impact of traffic in local towns and villages, supporting development in South Wiltshire by improving accessibility to key sites along the A303 corridor such as Solstice Park.	3
	Place-shaping: We need to deliver the infrastructure required to deliver our planned growth and regenerate our City and Town Centres, and improve our visitor and cultural offer	In terms of improving the visitor and cultural offer, a tunnel would remove the road and associated road traffic noise from a key part of the Stonehenge WHS, protecting and enhancing the setting of Stonehenge and other related monuments. The route option would allow the reconnection of the Avenue, and would reduce severance within the Stonehenge WHS, improving access for visitors and enhancing the visitor experience. The route option would also increase capacity on the A303, thereby reducing delays and disruption and improving journey times and journey time reliability along the route option. In 2031, the largest reduction in average end-to-end journey times would be approximately 8.5 minutes eastbound in the AM peak. In 2051, the largest reduction would be approximately 9.5 minutes, also eastbound in the AM peak. This could have the potential to improve perceptions of the area, which could play a role in supporting the visitor economy of Wiltshire and the wider South West region by attracting more repeat visitors. Improved connectivity between the South West and the East and South East of England would also be likely to benefit the economy more widely, by improving conditions for freight and other strategic traffic. It is possible that this could contribute towards making the region more attractive for potential developers.	3

Table 7: Option F010 (southern bypass, northerly option)

Document	Relevant objectives	Summary of impacts	Score
National policy alignment			
NPSNN	Networks with the capacity and connectivity and resilience to support national and local economic activity and facilitate growth and create jobs	This option would increase capacity and reduce congestion on the A303, particularly at weekends and in the summer months. It would reduce average end-to-end journey times, thereby improving connectivity with the East and South East of England for strategic traffic. It would also improve traffic conditions around Amesbury, supporting the local economy in South Wiltshire by improving accessibility to key sites along the A303 corridor such as Solstice Park. The route option would be designed and built to current standards, which would help to improve safety by providing a dual carriageway and managing junction access to maintain the flow of traffic, and increased capacity on the route option would improve resilience to accidents. However, this option would be longer than the existing A303, and average journey time savings would be smaller in comparison to options in Corridor D. The longer length of the route option could have the potential to result in increases in operating costs relative to the do nothing scenario. This could limit the benefits for users - particularly freight users. It is also less clear than for options in Corridor D that this route option would resolve existing traffic issues affecting communities such as Shrewton and Larkhill. The closure of the existing A303 between Countess and Longbarrow roundabouts could encourage traffic to divert on to local roads, increasing traffic flows through communities to the north of the A303 and resulting in adverse severance effects.	2
	Networks which support and improve journey quality, reliability and safety	This option would increase capacity on the A303, thereby reducing congestion and increasing reliability, particularly at weekends and in the summer months. It would be designed and built to current standards, which would help to improve safety by providing a dual carriageway and managing junction access to maintain the flow of traffic. It is estimated that this option would save about two accidents per year. The route option would reduce through traffic in Winterbourne Stoke, thereby reducing severance effects for local residents. However, this option and the closure of the existing A303 between Countess and Longbarrow roundabouts could encourage traffic to divert on to local roads, increasing traffic flows through communities to the north of the A303 and resulting in adverse severance effects. It is therefore less clear than for options in Corridor D that this route option would improve journey quality, reliability and safety for communities currently affected by 'rat running' such as Shrewton and Larkhill.	2
	Networks which support the delivery of environmental goals and	This option would result in a larger increase over 60 years in carbon emissions than options in Corridor D. ⁹ The route option has the potential to impact directly and indirectly on European and nationally designated sites including the River Avon SAC and River Avon System SSSIs (which	1

⁹ As part of the Stage 1 assessment, both definitions of Affected Road Network (ARN) were reviewed; due to the limitations of the regional changes in the current local model, the local ARN was used. It is recognised that not all changes in carbon emissions are captured with this approach, and this may skew the results of the emissions comparison, particularly during the early years of the scheme. This limitation will be appropriately addressed once the new regional model becomes available.

Document	Relevant objectives	Summary of impacts	Score
	the move to a low carbon economy	overlap with the River Avon SAC). The length of the route option also has the potential to result in a major loss of habitat and biodiversity and these cannot be compensated within the scheme. There is also the potential for moderate adverse effects on the water environment. This option would, however, result in a large beneficial impact on noise due to the reduced noise impact of the existing A303 on Amesbury. There is also the potential for a net improvement in local air quality due to a reduction to exposure of concentrations of particulate matter, although there is an increase in NOx emissions across the scheme area. While there are some benefits for the environment, alignment with this objective is considered to be weak overall due to the increase in carbon emissions.	
	Networks which join up our communities and link effectively to each other	This option would increase capacity on the A303, thereby reducing congestion and improving traffic conditions around Amesbury, particularly at weekends and in the summer months. It would reduce through traffic in Winterbourne Stoke, reducing severance effects for residents. Provision of grade separated junctions with pedestrian crossing facilities would also reduce the potential for the dualling of the existing alignment at Countess Roundabout to result in severance effects for residents of Countess Road. However, this option and the closure of the existing A303 between Countess and Longbarrow roundabouts could encourage traffic to divert on to local roads, increasing traffic flows through communities to the north of the A303 and resulting in an adverse severance effect. It is therefore less clear than for options in Corridor D that this route option would resolve existing traffic and severance issues in communities currently affected by 'rat running' such as Shrewton and Larkhill. The route option could also introduce new severance effects in communities to the south of the existing A303, in the Avon and Till valleys.	1
RIS1	Making the network safer	This option would increase capacity, improving resilience to accidents. The route option would be designed and built to current standards, which would help to improve safety by providing a dual carriageway and managing junction access to maintain the flow of traffic. It is estimated that this option would save about two accidents per year. However, this option and the closure of the existing A303 between Countess and Longbarrow roundabouts could encourage traffic to divert on to local roads, increasing traffic flows through communities to the north of the A303 and resulting in an adverse severance effect. It is therefore less clear than for options in Corridor D that this route option would improve journey quality, reliability and safety for communities currently affected by 'rat running' such as Shrewton and Larkhill.	2
	Improving user satisfaction	This option would increase capacity, thereby reducing congestion, increasing reliability, and improving the journey experience for users of the route option. It would also reduce through traffic in Winterbourne Stoke. However, this option and the closure of the existing A303 between Countess and Longbarrow roundabouts could encourage traffic to divert on to local roads, increasing traffic flows through communities to the north of the A303 and resulting in an adverse severance effect. It is therefore less clear than for options in Corridor D that this route option would improve journey quality, reliability and safety for users currently affected by 'rat running' such as Shrewton and Larkhill. This option would result in the loss of views of the Stonehenge WHS; overall, however, there would be a	2

Document	Relevant objectives	Summary of impacts	Score
		beneficial effect on journey quality due to the dualling of the route option and improvements to the condition of the road network.	
	Supporting the smooth flow of traffic	This option would increase capacity, thereby reducing delays and disruption and improving journey times and journey time reliability along the route option. This would improve the corridor for strategic traffic, improve traffic conditions around Amesbury, and support improved accessibility to key sites along the A303 corridor such as Solstice Park. However, this option would be longer than the existing A303, and average journey time savings would therefore be smaller in comparison to options in Corridor D. In 2031, the largest decrease in average end-to-end journey times would be approximately 7 minutes eastbound in the AM peak. In 2051, the largest decrease would be approximately 9 minutes, also eastbound in the AM peak.	2
	Encouraging economic growth by working to minimise delay	This option would support the South West regional economy by reducing average journey times and thereby improving connectivity with the East and South East of England for strategic traffic. It would also improve traffic conditions around Amesbury and support the local economy in South Wiltshire by improving accessibility to sites along the A303 corridor such as Solstice Park. However, this option would be longer than the existing A303, and average journey time savings would therefore be smaller in comparison to options in Corridor D. The longer length of the route option could have the potential to result in increases in operating costs relative to the do nothing scenario.	2
	Delivering better environmental outcomes	This option would result in a large beneficial impact on noise, due to the reduced noise impact of the existing A303 on Amesbury. The route option has the potential to impact directly and indirectly on European and nationally designated sites, including the River Avon SAC and River Avon System SSSIs (which overlap with the River Avon SAC). The length of the route option has the potential to result in significant loss of priority habitats and associated biodiversity. There is also the potential for a net improvement in local air quality due to a reduction to exposure of concentrations of particulate matter, although there is an increase in NOx emissions across the scheme area. This option would result in a larger increase in carbon emissions than options in Corridor D. ¹⁰ The KPIs which sit under this objective are to reduce the impact of noise and to improve biodiversity. Additional performance indicators are air quality, carbon dioxide and greenhouse gas emissions. Therefore alignment is considered to be moderate, despite the increase in carbon emissions.	2
	Helping cyclists, pedestrians and other vulnerable users	It is estimated that this option would save about two accidents per year, which could have particular benefits for pedestrians and older people who are more likely than average to be involved in accidents in the area. There will also be access for NMUs to the existing A303. This option would reduce through traffic from Winterbourne Stoke; however, the alignment of this option and the closure of the existing A303 between Countess and Longbarrow roundabouts could encourage traffic to divert on to	2

¹⁰ As part of the Stage 1 assessment, both definitions of Affected Road Network (ARN) were reviewed; due to the limitations of the regional changes in the current local model, the local ARN was used. It is recognised that not all changes in carbon emissions are captured with this approach, and this may skew the results of the emissions comparison, particularly during the early years of the scheme. This limitation will be appropriately addressed once the new regional model becomes available.

Document	Relevant objectives	Summary of impacts	Score
		local roads, increasing traffic flows through communities to the north of the A303, and resulting in adverse severance effects. It is therefore less clear than for options in Corridor D that this route option would resolve existing traffic issues in communities currently affected by 'rat running' such as Shrewton and Larkhill. The route option would reduce severance at eight PRoW. However it would increase severance at approximately 16 and indirectly cause severance at a further nine. It could also introduce new severance effects to communities to the south of the existing A303.	
Local policy alignment			
Wiltshire Core Strategy	Strategic Objective 1: Delivering a thriving economy	This option would support the South West regional economy by reducing average journey times and thereby improving connectivity with the East and South East of England for strategic traffic. It would also reduce the impact of traffic in local towns and villages, supporting the local economy in South Wiltshire by improving accessibility to key sites along the A303 corridor, such as Solstice Park. In terms of supporting the tourism sector in Wiltshire, it would reduce severance within the Stonehenge WHS, improving access for visitors and potentially enhancing the visitor experience. However, this option would be longer than the existing A303, and average journey time savings would therefore be smaller in comparison to options in Corridor D. The longer length of the route option could have the potential to result in increases in operating costs relative to the do nothing scenario. This could limit the benefits for users - particularly freight users.	2
	Strategic Objective 4: Helping to build resilient communities	This option would increase capacity on the A303, thereby reducing congestion and improving traffic conditions around Amesbury and in some communities along the route option, particularly at weekends and in the summer months. Increased capacity on the route option would improve resilience to accidents, and the route option would be designed and built to current standards, which would help to improve safety by providing a dual carriageway and managing junction access to maintain the flow of traffic. It is estimated that this option would save about two accidents per year. The route option would also reduce through traffic in Winterbourne Stoke, thereby reducing severance effects for local residents. However, this option and the closure of the existing A303 between Countess and Longbarrow roundabouts could encourage traffic to divert on to local roads, increasing traffic flows through communities to the north of the A303 and resulting in adverse severance effects. It is therefore less clear than for options in Corridor D that this route option would improve journey quality, reliability and safety for communities currently affected by 'rat running' such as Shrewton and Larkhill.	2
	Strategic Objective 5: Protecting and enhancing the natural, historic and built environment	The route option has the potential to impact directly and indirectly on a number of European and nationally designated sites, including the River Avon SAC and River Avon System SSSIs (which overlap with the River Avon SAC). The length of the route option also has the potential to result in a major loss of habitat and biodiversity and these cannot be compensated within the scheme. There would be the potential for a range of slight to very large adverse impacts on landscape character – including very large adverse impacts on the Upper Avon Narrow Chalk River Valley and large adverse	2

Document	Relevant objectives	Summary of impacts	Score
		<p>impacts on the Larkhill and Winterbourne Chalk Downland and Till Narrow Chalk River Valley Landscape Character Areas. There is the potential for a net improvement in local air quality due to a reduction to exposure of concentrations of particulate matter, although there is an increase in NOx emissions across the scheme area. There is also the potential for moderate adverse effects on the water environment.</p> <p>In terms of the historic and built environment, this option would result in a mixture of beneficial and adverse impacts on designated and non-designated assets. The beneficial impacts would arise from the removal of the existing A303 from Countess East to the Longbarrow Roundabout. The adverse impacts arise from the physical impact of construction on assets outside of the WHS and the impact of the new dual carriageway and its operational traffic on the setting of designated and non-designated assets. The removal of the A303 would also deliver benefits for over 100 scheduled monuments, and a number of listed buildings. Overall, within and outside the WHS, F010 would result in 132 beneficial impacts (22 very large, 49 large, 29 moderate, 32 slight,) and 161 adverse impacts (4 large, 36 moderate, 121 slight). Outside of the WHS, this includes harm to other designated assets: scheduled monuments, listed buildings, conservation areas; and the loss of non-designated, known and potential archaeology along its length. Overall whilst the harm to the other assets does weight slightly against the benefits of F010, the scheme is still considered to deliver a large beneficial effect.</p>	
	Strategic Objective 6: Ensuring that adequate infrastructure is in place to support our communities	<p>This option would increase capacity on the A303, thereby reducing delays and disruption and improving journey time reliability along the route option, particularly at weekends and in the summer months. The route option would be designed and built to current standards, which would help to improve safety for all road users. As well as improving the corridor for strategic journeys, increasing capacity on the road would improve traffic conditions around Amesbury, and reduce through traffic in Winterbourne Stoke, reducing the severance effect of traffic. However, this option and the closure of the existing A303 between Countess and Longbarrow roundabouts could encourage traffic to divert on to local roads, increasing traffic flows through communities to the north of the A303 and resulting in adverse severance effects. It is therefore less clear than for options in Corridor D that this route option would resolve existing traffic issues in communities currently affected by 'rat running' such as Shrewton and Larkhill. There is also the potential for the route option to introduce new severance effects in communities to the south of the existing A303, in the Avon and Till valleys. The length of the route option could also limit journey time savings in comparison with options in Corridor D, and would result in an increase in carbon emissions that would be larger than for options in Corridor D.¹¹</p>	1
	Core Policy 4: Spatial strategy for the	<p>This option would provide a dual carriageway route option to the south of Amesbury. The route option would be likely to improve traffic conditions around Amesbury, which could potentially improve access</p>	2

¹¹ As part of the Stage 1 assessment, both definitions of Affected Road Network (ARN) were reviewed; due to the limitations of the regional changes in the current local model, the local ARN was used. It is recognised that not all changes in carbon emissions are captured with this approach, and this may skew the results of the emissions comparison, particularly during the early years of the scheme. This limitation will be appropriately addressed once the new regional model becomes available.

Document	Relevant objectives	Summary of impacts	Score
	Amesbury Community Area	to key sites in the area such as Solstice Park business park. This could potentially make these sites more attractive for potential developers and occupiers.	
	Core Policy 6: Stonehenge	This option would remove the road and associated road traffic noise from the entirety of the Stonehenge WHS, which is a substantial benefit for the Stonehenge WHS and the setting of Stonehenge and other Scheduled Monuments within the site (see detail under Core Policy 59 below). As well as protecting the OUV of the site, this policy also sets out criteria for new visitor facilities at Stonehenge, including the setting of Stonehenge, the visitor experience, and environmentally sensitive methods of managing visitors to and from the site. This option would support the policy by reducing severance within the Stonehenge WHS, improving access for visitors, and improving the visitor experience	3
	Core Policy 59: The Stonehenge, Avebury and Associated Sites WHS and its setting	This option would remove the road and associated road traffic noise from the entirety of the Stonehenge WHS, which is a substantial benefit for the Stonehenge WHS and the setting of Stonehenge and other Scheduled Monuments within the site. It would also allow the reconnection of the Avenue. There would be limited visibility of the option from the southern fringes of the Stonehenge WHS, and the setting of some designated assets that contribute to OUV would be slightly adversely affected. Overall, however, the option would result in a Large Beneficial impact on the WHS.	3
WHS Management Plan	Aim 3: Sustain the OUV of the Stonehenge WHS through the conservation and enhancement of the Site and its attributes of OUV	This option would remove the road and site and sound of associated traffic from the entirety of the Stonehenge WHS, which is a substantial benefit for the Stonehenge WHS and the setting of Stonehenge and other Scheduled Monuments within the site. It would also allow the reconnection of the Avenue. There would be limited visibility of the option from the southern fringes of the Stonehenge WHS, and the setting of some designated assets that contribute to OUV would be slightly adversely affected. Overall, however, the option would result in a Large Beneficial impact on the WHS.	3
	Aim 6: Reduce significantly the negative impacts of roads and traffic on the Stonehenge WHS and its attributes of OUV and increase sustainable access to the Stonehenge WHS.	This option would remove the road and associated road traffic noise from the Stonehenge WHS in its entirety, which is a substantial benefit for the Stonehenge WHS and the setting of Stonehenge and other Scheduled Monuments within the site. Regarding sustainable access, it would also reduce severance within the Stonehenge WHS, improving access for visitors, including those living in communities surrounding the Stonehenge WHS.	3
Wiltshire Local Transport Plan	Support economic growth	This option would increase capacity on the A303, thereby reducing delays and disruption and improving journey time reliability along the route option, particularly at weekends and in the summer months. Increased capacity on the route option would improve resilience to accidents, and the route option would be designed and built to current standards, which would help to improve safety by providing a dual carriageway and managing junction access to maintain the flow of traffic. This would	2

Document	Relevant objectives	Summary of impacts	Score
		improve the corridor for strategic traffic such as freight, and would support the South West regional economy by improving connectivity with the East and South East of England. It would also improve traffic conditions around Amesbury, supporting the local economy in South Wiltshire by improving accessibility to key sites along the A303 corridor such as Solstice Park business park. However, this option would be longer than the existing A303, and average journey time savings would be smaller in comparison to options in Corridor D. In 2031, the largest decrease in average end-to-end journey times would be approximately 7 minutes eastbound in the AM peak. In 2051, the largest decrease would be approximately 9 minutes, also eastbound in the AM peak. The longer length of the route option could have the potential to result in increases in operating costs relative to the do nothing scenario. This could limit the benefits for users - particularly freight users.	
	Reduce carbon emissions	All of the options assessed would result in an increase in carbon emissions compared with the existing A303. Option Corridor F010 is predicted to result in higher estimated increases in CO2 emissions than options in Corridor D as it is longer and would therefore result in smaller journey time savings and greater user emissions. ¹²	1
	Contribute to better safety, security and health	This option would be designed and built to current standards, which would help to improve safety by providing a dual carriageway and managing junction access to maintain the flow of traffic. It is estimated that this option would save about two accidents per year. This option would reduce through traffic from Winterbourne Stoke; however, the alignment of this option and the closure of the existing A303 between Countess and Longbarrow roundabouts could encourage traffic to divert on to local roads, increasing traffic flows through communities to the north of the A303, and resulting in adverse severance effects. It is therefore less clear than for options in Corridor D that this route option would resolve existing traffic issues in communities currently affected by 'rat running' such as Shrewton and Larkhill. The route option would reduce severance at eight PRoW. However it would increase severance at approximately 16 and indirectly cause severance at a further nine. It could also introduce new severance effects to communities to the south of the existing A303. There will be access for NMUs to the existing A303.	2
	Promote equality of opportunity	The improved A303 would be designed and built to current standards, which would help to improve safety by providing a dual carriageway and managing junction access to maintain the flow of traffic. It is estimated that this option would save about two accidents per year, which could have particular benefits for pedestrians and older people who are more likely than average to be involved in accidents in the area. It is expected that there would be a beneficial effect on traveller stress, due to improved safety, reduced traveller frustration, and reduced fear of accidents. The route option would result in an	2

¹² As part of the Stage 1 assessment, both definitions of Affected Road Network (ARN) were reviewed; due to the limitations of the regional changes in the current local model, the local ARN was used. It is recognised that not all changes in carbon emissions are captured with this approach, and this may skew the results of the emissions comparison, particularly during the early years of the scheme. This limitation will be appropriately addressed once the new regional model becomes available.

Document	Relevant objectives	Summary of impacts	Score
		<p>increase in travel distances of around 4.1km, and an overall increase in vehicle operating costs and therefore a slight adverse impact on affordability for local users.</p> <p>The alignment of this option and the closure of the existing A303 between Countess and Longbarrow roundabouts could encourage traffic to divert on to local roads, increasing traffic flows through communities to the north of the A303, and resulting in adverse severance effects in communities currently affected by 'rat running' such as Shrewton and Larkhill. Provision of grade separated junctions with pedestrian crossing facilities would reduce the potential for the dualling of the existing alignment at Countess Roundabout to result in severance effects for residents of Countess Road, but the route option could introduce new severance effects to communities to the south of the existing A303. There are concentrations of older people and children in affected areas including Durrington, Larkhill, Shrewton, Great Durnford/Upper Woodford, and between Berwick St James and Winterbourne Stoke, and concentrations of older people between Berwick St James and Winterbourne Stoke, and so any increase in severance could have the potential for particular adverse effects for these groups.</p> <p>Without mitigation, the route option would reduce severance at eight Public Rights of Way (PRoW). However it would increase severance at approximately 16 and indirectly cause severance at a further nine. There would be access for Non-Motorised Users (NMUs) to the existing A303.</p>	
	<p>Improve quality of life and promote a healthy natural environment</p>	<p>This option would increase capacity on the A303, thereby reducing congestion, increasing reliability, and improving traffic conditions for users of the route option, particularly at weekends and in the summer months. It would reduce through traffic in Winterbourne Stoke, reducing the severance effect of traffic, and would result in a large beneficial impact on noise as a result of reducing the noise impact of the existing A303 on Amesbury. There is also the potential for net improvement in local air quality due to a reduction to exposure of concentrations of particulate matter, although there is an increase in NOx emissions across the scheme area. However, the closure of the existing A303 between Countess and Longbarrow roundabouts could encourage traffic to divert on to local roads, increasing traffic flows through communities to the north of the A303 and resulting in adverse severance effects. It is therefore less clear than for options in Corridor D that this route option would improve journey quality, reliability and safety for communities currently affected by 'rat running' such as Shrewton and Larkhill. The route option has the potential to impact directly and indirectly on European and nationally designated sites including the River Avon SAC and River Avon System SSSIs (which overlap with the River Avon SAC). The length of the route option also has the potential to result in a major loss of habitat and biodiversity and these cannot be compensated within the scheme. There is the potential for a range of slight to very large adverse impacts on landscape character – including very large adverse impacts on the Upper Avon Narrow Chalk River Valley and large adverse impacts on the Larkhill and Winterbourne Chalk Downland and Till Narrow Chalk River Valley Landscape Character Areas. The route option would reduce severance at eight PRoW. However it would increase</p>	<p>2</p>

Document	Relevant objectives	Summary of impacts	Score
		severance at approximately 16 and indirectly cause severance at a further nine. It could also introduce new severance effects to communities to the south of the existing A303. There will be access for NMUs to the existing A303. This option would result in the loss of views of the Stonehenge WHS; overall, however, there would be a beneficial effect on journey quality due to the dualling of the route option and improvements to the condition of the road network.	
Swindon and Wiltshire LEP, Strategic Economic Plan	Transport infrastructure improvements: We need a well-connected, reliable and resilient transport system to support economic and planned development growth at key locations	This option would increase capacity on the A303, thereby reducing delays and disruption and improving journey time reliability along the route option, particularly at weekends and in the summer months. Increased capacity on the route option would improve resilience to accidents, and the route option would be designed and built to current standards, which would help to improve safety by providing a dual carriageway and managing junction access to maintain the flow of traffic. This would improve the corridor for strategic traffic such as freight, and would support the South West regional economy by improving connectivity with the East and South East of England. It would also improve traffic conditions around Amesbury, potentially supporting planned development in South Wiltshire by improving accessibility to key sites along the A303 corridor such as Solstice Park. However, this option would be longer than the existing A303, and average journey time savings would be smaller in comparison to options in Corridor D. In 2031, the largest decrease in average end-to-end journey times would be approximately 7 minutes eastbound in the AM peak. In 2051, the largest decrease would be approximately 9 minutes, also eastbound in the AM peak. The longer length of the route option could have the potential to result in increases in operating costs relative to the do nothing scenario, which could limit the benefits for users, particularly freight users.	2
	Place-shaping: We need to deliver the infrastructure required to deliver our planned growth and regenerate our City and Town Centres, and improve our visitor and cultural offer	In terms of improving the visitor and cultural offer, this option would remove the road and associated road traffic noise from the entirety of the Stonehenge WHS, protecting and enhancing the setting of Stonehenge and other Scheduled Monuments. The route option would allow the reconnection of the Avenue, and would reduce severance within the Stonehenge WHS, improving access for visitors and enhancing the visitor experience. The route option would also increase capacity on the A303, thereby reducing delays and disruption and improving journey time reliability along the route option. This could have the potential to improve perceptions of the area, and could play a role in supporting the visitor economy of Wiltshire and the wider South West region by attracting more repeat visitors. Improved connectivity between the South West and the East and South East of England would also be likely to benefit the economy more widely by improving conditions for freight and other strategic traffic, and potentially by improving accessibility to key sites along the A303 corridor such as Solstice Park. It is possible that this could contribute towards making the region more attractive for potential developers. However, this option would be longer than the existing A303, which would result in smaller journey time savings in comparison to options in Corridor D. In 2031, the largest decrease in average end-to-end journey times would be approximately 7 minutes eastbound in the AM peak. In 2051, the largest decrease would be approximately 9 minutes, also eastbound in the AM peak. There is also the	2

Document	Relevant objectives	Summary of impacts	Score
		potential that the longer route option would result in an increase in operating costs relative to the do minimum scenario, which could limit the benefits for users, particularly freight users.	

National and local policy objectives

Table 8 provides further information on the goals and strategic objectives that have formed the basis of the policy assessment.

Table 8: Relevant policy objectives

Document	Relevant objectives	Further information
National policy alignment		
NPSNN	Networks with the capacity and connectivity and resilience to support national and local economic activity and facilitate growth and create jobs	The National Networks National Policy Statement sets out the need for, and Government's policies to deliver, development of nationally significant infrastructure projects (NSIPs) on the national road and rail networks in England. It provides planning guidance for promoters of nationally significant infrastructure projects on the road and rail networks, and the basis for the examination by the Examining Authority and decisions by the Secretary of State.
	Networks which support and improve journey quality, reliability and safety	
	Networks which support the delivery of environmental goals and the move to a low carbon economy	
	Networks which join up our communities and link effectively to each other	
RIS1	Making the network safer	Target to reduce the number of people killed or seriously injured in accidents on the Strategic Road Network (SRN) by 40% by the end of 2020 against the 2005-2009 average baseline.
	Improving user satisfaction	Target to achieve 90% of respondents to the National Road User Satisfaction Survey who are very or fairly satisfied by March 2017.
	Supporting the smooth flow of traffic	Targets to ensure that 97% of the SRN is available to traffic, and that 85% of motorway incidents are cleared within one hour.
	Encouraging economic growth by working to minimise delay	Target to reduce average time lost per vehicle per mile.
	Delivering better environmental outcomes	KPIs are to reduce the impact of noise and to improve biodiversity. Additional performance indicators cover impacts on air quality, carbon dioxide, and greenhouse gas emissions.

Document	Relevant objectives	Further information
	Helping cyclists, pedestrians and other vulnerable users	Aims to support the Government's aspiration to improve provision for cyclists, walkers and other vulnerable users on and around the SRN.
Regional policy alignment		
Wiltshire Core Strategy	Strategic Objective 1: Delivering a thriving economy	<p>Relevant key outcomes include:</p> <p>Wiltshire's tourism sector will have grown in a sustainable way, ensuring the protection and where possible enhancement of Wiltshire's environmental and heritage assets, including the delivery of new tourist accommodation and where appropriate the safeguarding of existing facilities.</p>
	Strategic Objective 4: Helping to build resilient communities	<p>Relevant key outcomes include:</p> <p>A positive contribution will have been made to help areas of social exclusion, especially access to essential services and local facilities in the rural areas, which will have been improved.</p>
	Strategic Objective 5: Protecting and enhancing the natural, historic and built environment	<p>Relevant key outcomes include:</p> <p>Where possible, development will have been directed away from our most sensitive and valuable natural assets, habitats and species, towards less sensitive locations.</p> <p>New development will have contributed to delivery of the Wiltshire Biodiversity Action Plan (BAP) targets and protected, maintained and enhanced BAP habitats and species, particularly within areas identified for landscape scale conservation.</p> <p>Good air quality will have been maintained and significant progress will have been made in treating areas of risk through the implementation of air quality management plans.</p> <p>The quality and quantity of Wiltshire's groundwater and surface water features will have been improved, helping to achieve the objectives of the Water Framework Directive.</p> <p>Features and areas of historical and cultural value will have been conserved and where possible enhanced, including the sensitive re-use of historical buildings where appropriate.</p> <p>Archaeological sites and features will have been adequately protected.</p> <p>The Stonehenge and Avebury WHS and its setting will have been protected from inappropriate development in order to sustain its OUV.</p>
	Strategic Objective 6: ensuring that adequate infrastructure is in place to support our communities	<p>Relevant key outcomes include:</p> <p>The provision of new or improved infrastructure will have been positively supported provided there is no detrimental environmental impact.</p> <p>Progress will have been made to ensure policies are helping to reduce greenhouse gas emissions associated with transport.</p> <p>Measures will have been implemented which reduce traffic delays and disruption, and improve journey time reliability on key route options.</p> <p>Safety for all road users will have been improved, the number of casualties on Wiltshire's roads reduced and the impact of traffic speeds in towns and villages mitigated.</p>

Document	Relevant objectives	Further information
		Access to local jobs and services will have been improved. Strategic transport corridors within Wiltshire will have been safeguarded and, where appropriate, improved in a sustainable way.
Wiltshire Local Transport Plan	Support economic growth	Relevant Strategic Objectives include: SO1: To support and help improve the vitality, viability and resilience of Wiltshire's economy and market towns SO4: To minimise traffic delays and disruption and improve journey time reliability on key roads SO10: To encourage the efficient and sustainable distribution of freight in Wiltshire SO16: To improve the resilience of the transport system to impacts such as adverse weather, climate change and peak oil
	Reduce carbon emissions	Relevant Strategic Objectives include: SO11: To reduce the level of air pollutant and climate change emissions from transport
	Contribute to better safety, security and health	Relevant Strategic Objectives include: SO8: To improve safety for all road users and to reduce the number of casualties on Wiltshire's roads SO9: To reduce the impact of traffic speeds in towns and villages SO14: To promote travel modes that are beneficial to health
	Promote equality of opportunity	Relevant Strategic Objectives include: SO5: To improve sustainable access to a full range of opportunities particularly for those people without access to a car SO15: To reduce barriers to transport and access for people with disabilities and mobility impairment
	Improve quality of life and promote a healthy natural environment	Relevant Strategic Objectives include: SO3: To reduce the impact of traffic on people's quality of life and Wiltshire's built and natural environment SO7: To enhance Wiltshire's public realm and streetscape SO18: To enhance the journey experience of transport users
Stonehenge, Avebury and Associated Sites WHS Management	Aim 3: Sustain the OUV of the Stonehenge WHS through the conservation and enhancement of the Site and its attributes of OUV	Relevant policies include: Policy 3a – Manage the WHS to protect the physical remains which contribute to its attributes of OUV and improve their condition Policy 3c – Maintain and enhance the setting of monuments and sites in the landscape and their interrelationships and astronomical alignments with particular attention given to achieving an appropriate landscape setting for the monuments and the WHS itself

Document	Relevant objectives	Further information
	Aim 6: Reduce significantly the negative impacts of roads and traffic on the Stonehenge WHS and its attributes of OUV and increase sustainable access to the Stonehenge WHS.	Relevant policies include: Policy 6a – Identify and implement measures to reduce the negative impacts of roads, traffic and parking on the WHS and to improve road safety and the ease and confidence with which residents and visitors can explore the WHS
Swindon and Wiltshire LEP Strategic Economic Plan	Transport infrastructure improvements - we need a well-connected, reliable and resilient transport system to support economic and planned development growth at key locations	Relevant Priority Actions include: Deliver key road junction and infrastructure improvements to support economic and planned development growth Deliver a whole corridor approach to traffic management and maintenance on key route options to improve reliability and resilience
	Place shaping - we need to deliver the infrastructure required to deliver our planned growth and regenerate our City and Town Centres, and improve our visitor and cultural offer	Relevant Priority Actions include: Deliver infrastructure improvements to support economic growth, support higher value skilled employment and attract inward investment Develop a strong visitor economy resulting in new investment as well as increased trade, visitor spend and national and international staying visitors
Local policy alignment		
Wiltshire Core Strategy	Core Policy 4: Spatial strategy for the Amesbury Community Area	Scheme is located within Amesbury Community Area. Policy sets out allocations for employment and housing land in this area, and identifies existing Principal Employment Areas.
	Core Policy 6: Stonehenge	Scheme will have direct impact on Stonehenge WHS. Client Scheme Requirements include objectives to contribute to the setting and environment of both the Stonehenge monument and the wider Stonehenge WHS landscape. Policy sets out commitment to protecting Stonehenge WHS and criteria for new visitor facilities.
	Core Policy 59: The Stonehenge, Avebury and Associated Sites WHS and its setting	Scheme will have direct impact on Stonehenge WHS. Client Scheme Requirements include objectives to contribute to the setting and environment of both the Stonehenge monument and the wider Stonehenge WHS landscape. Policy sets out commitment to sustaining the OUV of the Stonehenge WHS.

Appendix H Assessment summary

H.1 Appraisal summary tables

H.1.1 D061

Appraisal Summary Table		Date produced:	21st Dec	2016	Contact:				
Name of scheme:		A303 Amesbury to Berwick Down			Name	Stephen Bussell			
Description of scheme:		Route Option D061 is a part surface / part tunnelled route which includes a 2.9km tunnel through part of the WHS and a bypass to the north of Winterbourne Stoke. The eastern tunnel portal is located east of The Avenue with the western tunnel portal located west of Normanton Gorse. The route gives an increased journey distance of approximately 400m compared to the existing A303 route.			Organisation	AAJV			
					Role	Economics and Business Case Workstream Lead			
Impacts	Summary of key impacts	Assessment							
		Quantitative			Qualitative	Monetary £(NPV)	Distributional 7-pt scale/ vulnerable grp		
Economy	Business users & transport providers	Value of journey time changes(£)			203,992,000	N/A	Moderate Beneficial		
		Net journey time changes (£)							
		0 to 2min	2 to 5min	> 5min					
		75,788,373	69,022,822	59,180,805					
	Reliability impact on business users	Increased capacity through the provision of a dual carriageway, together with junction improvements would lead to an improvement in day-to-day reliability whilst also reducing the frequency and impact of traffic incidents. Reliability is also improved by the attraction of traffic from local roads therefore reducing incidents.			Assessment based on comparison of reliability performance of single and dual carriageway sections of the A303	N/A	14,600,000		
	Regeneration	The scheme is unlikely to have a significant impact on accessibility or economic activity in either of the identified regeneration areas in central Salisbury, or on areas of deprivation in Salisbury and Wilton. Therefore, a formal assessment has not been undertaken at this stage.			N/A	Neutral	N/A		
	Wider Impacts	Moderate agglomeration benefits are expected, driven particularly by reductions in journey costs between and within Salisbury and West Wiltshire but also due to improved links to the Andover/Test Valley area and beyond to Basingstoke and Newbury in the East and Bath in the West. Very slight benefits expected to result from an increase labour market participation resulting from reduced commuting costs. Slight benefits expected to result from increased output in imperfectly competitive markets. Assessment based on Wider Impacts guidance may understate total value of wider economic benefits.			Agglomeration £87 m (PVB) Labour market impacts £4m (PVB) Output in imperfectly competitive markets £6 m (PVB)	N/A	97,000,000		
Environmental	Noise	Less than 10 Households are likely to qualify for noise insulation due to road traffic noise. The 8 schools and the library within the noise impact study area are not expected to experience a significant noise change. There are fewer properties in the study area that would experience a noise decrease than a noise increase, however there would be an overall monetised benefit due to small increases in noise level and large decreases in noise level to these properties. The monetised benefit of D061 would offer less benefit due to the large noise impact from the road realignment to the north of Winterbourne Stoke.			~1100 Households are likely to experience an increase in daytime noise in the last forecast year (2039) ~600 Households are likely to experience a decrease in daytime noise in the last forecast year (2039) ~300 Households are likely to experience an increase in night time noise in the last forecast year (2039) ~300 Households are likely to experience a decrease in night time noise in the last forecast year (2039)	N/A	180,000	Moderate Beneficial	
	Air Quality	The nearest Air Quality Management Areas (AQMA) are located in Salisbury, approximately 11 km south of D061, within the Affected Road Network (ARN). There would be no new exceedances as a result. D061 would change air quality at receptors for NO2/PM10 by: improving 5981/3240, worsening 5026/3003, with no change at 7479/12243 receptors. Overall there would be a net improvement in local air quality with the scheme (for PM10 and NO2) as a result of the realignment of the A303 away from sensitive receptors. There would be a negative impact on regional emissions for NOx due to increases in vehicle flows and the distance travelled.			Local Air Quality Assessment Score: PM10: -43 NO2: -221 Regional Emissions (Over 60 year appraisal period) NOx: +1,481 tonnes	N/A	PM10 NPV: +481,000 NOx NPV: -792,000 Total value of change in air quality: -310,000	Slight Adverse	
	Greenhouse gases	The change in non-traded carbon dioxide emissions in the opening year 2024 would be 14,655 tCO2e. The assessment is caveated as it is based solely on the local traffic model as SWRM is not available until PCF 2 Stage 2.			Change in non-traded carbon over 60y (CO2e)	1,098,266	N/A	-50,106,484	
						Change in traded carbon over 60y (CO2e)	0		
		Landscape	Overall this 13.2km route would affect the landscape as a result of Moderate Adverse impacts identified for the Larkhill Chalk Downland, Till Narrow Chalk River Valley and Tilshed Chalk Downland Landscape Character Areas. This includes a decrease in tranquillity, reduced quality of visual amenity and adverse impact on the scale and pattern of the landscape. The adverse effects of D061 would be due to the grade separated junction with the existing A303 east of Winterbourne Stoke, and the offline section across these landscape character areas and the height of the proposed route above the valley floor to the north of Winterbourne Stoke.			N/A	Moderate Adverse	N/A	
		Townscape	It is anticipated that there would not be any notable impacts on townscape as a result of D061.			N/A	Neutral	N/A	
		Historic Environment	Historic Environment: The settings of many scheduled monuments within and around the WHS would benefit from the removal of the existing A303, including Stonehenge and the Avenue, this would result in a number of beneficial effects. The construction of the new route would have adverse impacts on the setting of many other scheduled monuments and the fabric of one monument and numerous areas of non-designated archaeology, this would result in a greater number of adverse effects than beneficial effects. Additionally, there would be adverse impacts on a number of listed buildings, a conservation area and a registered park and garden; resulting in adverse effects on these environmental resources. Although there are a greater number of adverse effects, national policy requires considerable weight to be given to impacts on the highest value assets e.g. the WHS, Stonehenge and the Avenue. Consequently, when balancing impacts on the historic environment a Neutral balance has been recorded to reflect this weighting. Stonehenge, Avebury and Associated Sites World Heritage Site (WHS): The removal of the existing A303 from part of the Stonehenge, Avebury and Associated Sites World Heritage Site (WHS) and the diversion of traffic through a tunnel would benefit the WHS. There are however adverse impacts on other aspects of the WHS; overall a Slight / Moderate Beneficial effect on the WHS is recorded.			N/A	Neutral	N/A	
	Biodiversity	A precautionary approach to assessment is taken of potential significant adverse impacts on designated international and national ecological sites, including the River Avon SAC and the River Till and River Avon System SSSIs. This is due to the construction of a tunnel, the uncertainty over construction methodology, and size / footprint of one new crossing over the River Till. Mitigation through design should lead to a reduction of the scale of impact for the latter receptor.			N/A	Large Adverse	N/A		
	Water Environment	Current assessment shows that a number of water environment features are within the area of influence of D061, resulting in potentially significant effects. These features include local groundwater abstractions, surface and groundwater dependent biodiversity in the Rivers Till and Avon, flood risk and local groundwater fed surface water features. One of the construction methodologies may require dewatering of the Chalk aquifer. Overall, operational risks are considered to be significantly lower than those associated with construction.			N/A	Large Adverse	N/A		
Social	Commuting and Other users	Removal of congestion resulting from lack of capacity at junctions and on existing single carriageway, producing significant improvements in journey times.			Value of journey time changes(£)		370,618,000	N/A	Moderate Beneficial
					Net journey time changes (£)				
		0 to 2min	2 to 5min	> 5min					
			106,726,168	112,450,827	151,441,004				
		Reliability impact on Commuting and Other users	Increased capacity through the provision of a dual carriageway, together with junction improvements would lead to an improvement in day-to-day reliability whilst also reducing the frequency and impact of traffic incidents. Reliability is also improved by the attraction of traffic from local roads therefore reducing incidents.			Assessment based on comparison of reliability performance of single and dual carriageway sections of the A303	N/A	46,000,000	
		Physical activity	Overall D061 would result in a beneficial effect on physical activity. D061 would reduce severance at approx 18 Public Rights of Way (PRoW) and cause severance at 9 PRoW.			N/A	Beneficial	N/A	
		Journey quality	Loss of views of the WHS including Stonehenge is an adverse effect. However a dualled alignment would improve travellers ability to make good progress along the route and an improvement to the condition of the road network would reduce both fear of potential accidents and route uncertainty.			N/A	Moderate Beneficial	N/A	
		Accidents	Replacement of existing single carriageway with grade-separated dual carriageway would save about six accidents per year.			Monetised assessment of benefits of changes in accidents using COBALT software	N/A	29,233,300	Moderate Beneficial
		Security	No significant impacts on personal security have been identified at this stage.			N/A	Neutral	N/A	Neutral
		Access to services	No impacts identified for public transport services and access to services.			N/A	Neutral	N/A	Neutral
	Affordability	There is likely to be a slight reduction in vehicle operating costs due to reduced congestion, and a slight increase in vehicle operating costs due to travelling further, although the further distance will be minimal. Overall, the impact on affordability for users will be neutral.			N/A	Neutral	N/A	Neutral	
	Severance	Through realignment of the highway and redistribution of traffic Option D061 would reduce severance within and between several settlements in the vicinity.			N/A	Moderate Beneficial	N/A	Large Beneficial	
	Option and non-use values	It is unlikely this scheme will have any impact on Option Values as there is no new provision of public transport services or removal of existing services.			N/A	Neutral	N/A		
Public Accounts	Cost to Broad Transport Budget	A publicly-funded option is the most likely commercial route to delivery of the scheme. Therefore, at this stage, it is assumed the entire cost of the scheme will be borne by the Transport Budget.			Indicative capital cost estimates provided by Highways England Commercial team. Allowance of tunnel and surface highway operating and maintenance costs included.		N/A	1,050,879,000	
	Indirect Tax Revenues	The increase in indirect taxation is marginal. There is a minor increase in indirect taxation due to vehicles travelling a slightly greater distance and therefore there is a minor net positive change in fuel duty revenue through increased vehicle operating costs.			Assessed based on traffic model outputs using TUBA software		N/A	16,577,000	

H.1.2 D062

Appraisal Summary Table		Date produced:	21st Dec	2016	Contact:																				
Name of scheme:		A303 Amesbury to Berwick Down			Name	Stephen Bussell																			
Description of scheme:		Route Option D062 is a part surface / part tunnelled route which includes a 2.9km tunnel through part of the WHS and a bypass to the south of Winterbourne Stoke. The eastern tunnel portal is located east of The Avenue with the western tunnel portal located west of Normanton Gorse. The route gives an increased journey distance of approximately 400m compared to the existing A303 route.			Organisation	AAJV																			
					Role	Economics and Business Case Workstream Lead																			
Impacts	Summary of key impacts	Assessment																							
		Quantitative			Qualitative	Monetary £(NPV)	Distributional 7-pt scale/ vulnerable grp																		
Economy	Business users & transport providers	Removal of congestion resulting from lack of capacity at junctions and on existing single carriageway resulting in substantial improvements in journey times and therefore lower transport costs.			<table border="1"> <tr> <td colspan="3">Value of journey time changes (£)</td> <td>202,898,000</td> </tr> <tr> <td colspan="3">Net journey time changes (£)</td> <td></td> </tr> <tr> <td>0 to 2min</td> <td>2 to 5min</td> <td>> 5min</td> <td></td> </tr> <tr> <td>71,943,736</td> <td>66,393,281</td> <td>64,560,983</td> <td></td> </tr> </table>	Value of journey time changes (£)			202,898,000	Net journey time changes (£)				0 to 2min	2 to 5min	> 5min		71,943,736	66,393,281	64,560,983		N/A	195,969,000	Moderate Beneficial	
	Value of journey time changes (£)			202,898,000																					
	Net journey time changes (£)																								
	0 to 2min	2 to 5min	> 5min																						
71,943,736	66,393,281	64,560,983																							
Reliability impact on Business users	Increased capacity through the provision of a dual carriageway, together with junction improvements would lead to an improvement in day-to-day reliability whilst also reducing the frequency and impact of traffic incidents. Reliability is also improved by the attraction of traffic from local roads therefore reducing incidents.			Assessment based on comparison of reliability performance of single and dual carriageway sections of the A303		N/A	14,600,000																		
Regeneration	The scheme is unlikely to have a significant impact on accessibility or economic activity in either of the identified regeneration areas in central Salisbury, or on areas of deprivation in Salisbury and Wilton. Therefore, a formal assessment has not been undertaken at this stage.			N/A		Neutral	N/A																		
Wider Impacts	Moderate agglomeration benefits are expected, driven particularly by reductions in journey costs between and within Salisbury and West Wiltshire but also due to improved links to the Andover/Test Valley area and beyond to Basingstoke and Newbury in the East and Bath in the West. Very slight benefits expected to result from an increased labour market participation resulting from reduced commuting costs. Slight benefits expected to result from increased output in imperfectly competitive markets. Assessment based on Wider Impacts guidance may understate total value of wider economic benefits.			Agglomeration £93 m (PVB) Labour market impacts £4m (PVB) Output in imperfectly competitive markets £6 m (PVB)		N/A	103,000,000																		
Environmental	Noise	Less than 15 Households are likely to qualify for noise insulation due to road traffic noise. The 8 schools and the library within the noise impact study area are not expected to experience a significant noise change. There are fewer properties in the study area that would experience a noise decrease than a noise increase, however there would be an overall monetised benefit due to small increases in noise level and large decreases in noise level to these properties. The monetised benefit of D062 would offer more benefit due to the lower noise impact from the road realignment to the south of Winterbourne Stoke, but would not reduce the noise impact of the existing A303 on Amesbury			~1100 Households are likely to experience an increase in daytime noise in the last forecast year (2039) ~600 Households are likely to experience a decrease in daytime noise in the last forecast year (2039) ~300 Households are likely to experience an increase in night time noise in the last forecast year (2039) ~300 Households are likely to experience a decrease in night time noise in the last forecast year (2039)		N/A	225,000	Moderate Beneficial																
	Air Quality	The nearest Air Quality Management Areas (AQMAs) are located in Salisbury, approximately 11km south of D062, within the Affected Road Network (ARN). There would be no new exceedances as a result of D062. D062 would change air quality at receptors for NO2/PM10 by: improving 5884/3096, worsening 4783/3074, with no change at 7819/12316 receptors. Overall there would be a net improvement in local air quality for D062 (for PM10 and NO2) as a result of the realignment of the A303 away from sensitive receptors. There would be a negative impact on regional emissions for NOx due to increases in vehicle flows and the distance travelled.			Local Air Quality Assessment Score: PM10: -40 NO2: -217 Regional Emissions (Over 60 year appraisal period) NOx: +1,448 tonnes		N/A	PM10 NPV: +455,000 NOx NPV: -772,000 Total value of change in air quality: -320,000	Slight Adverse																
	Greenhouse gases	The change in non-traded carbon dioxide emissions in the opening year 2024 would be 13,963 tCO2e. The assessment is caveated as it is based solely on the local traffic model as SWRM is not available until PCF Stage 2.			<table border="1"> <tr> <td>Change in non-traded carbon over 60y (CO2e)</td> <td>1,108,508</td> </tr> <tr> <td>Change in traded carbon over 60y (CO2e)</td> <td>0</td> </tr> </table>		Change in non-traded carbon over 60y (CO2e)	1,108,508	Change in traded carbon over 60y (CO2e)	0	N/A	-50,615,971													
	Change in non-traded carbon over 60y (CO2e)	1,108,508																							
	Change in traded carbon over 60y (CO2e)	0																							
	Landscape	Overall this 13.3km route would affect the landscape as a result of Moderate Adverse impacts identified for the Larkhill Chalk Downland, Till Narrow Chalk River Valley and Tilthead Chalk Downland Landscape Character Areas. This includes a decrease in tranquillity, reduced quality of visual amenity and adverse impact on the scale and pattern of the landscape. The adverse effects of D062 as it crosses the Till Valley to the south east of Winterbourne Stoke would result from the route cutting into a side spur of the valley side and by the height of the proposed route above the valley floor as it crosses the river between Berwick St. James and Winterbourne Stoke.			N/A		Moderate Adverse	N/A																	
Townscape	It is anticipated that there would not be any notable impacts on townscape as a result of D062			N/A		Neutral	N/A																		
Historic Environment	Historic Environment: The settings of many scheduled monuments within and around the WHS would benefit from the removal of the existing A303, including Stonehenge and the Avenue, this would result in a number of beneficial effects. The construction of the new route would have adverse impacts on the setting of many other scheduled monuments and the fabric of one monument and numerous areas of non-designated archaeology, this would result in a greater number of adverse effects than beneficial effects. Additionally, there would be a adverse impacts on a number of listed buildings, a conservation area and a registered park and garden; resulting in adverse effects on these environmental resources. Although there are a greater number of adverse effects, national policy requires considerable weight to be given to impacts on the highest value assets e.g. the WHS, Stonehenge and the Avenue. Consequently, when balancing impacts on the historic environment a Neutral balance has been recorded to reflect this weighting. Stonehenge, Avebury and Associated Sites World Heritage Site (WHS): The removal of the existing A303 from part of the Stonehenge, Avebury and Associated Sites World Heritage Site (WHS) and the diversion of traffic through a tunnel would benefit the WHS. There are however adverse impacts on other aspects of the WHS; overall a Moderate Beneficial effect on the WHS is recorded.			N/A		Neutral	N/A																		
Biodiversity	A precautionary approach to assessment is taken of potential significant adverse impacts on designated international and national ecological sites, including the River Avon SAC (including the River Till) and River Avon System SSSIs. This is due to the construction of a tunnel, the uncertainty over construction methodology, and size / footprint of one new crossing over the River Till. Mitigation through design should lead to a reduction of the scale of impact for the latter receptor.			N/A		Large Adverse	N/A																		
Water Environment	Current assessment shows that a number of water environment features are within the area of influence of D062, resulting in a number of potentially significant effects. These features would include local groundwater abstractions, surface and groundwater dependent biodiversity in the Rivers Till and Avon, flood risk and local groundwater fed surface water features. One of the construction methodologies may require dewatering of the Chalk Aquifer. Overall, operational risks are considered to be significantly lower than those associated with construction.			N/A		Large Adverse	N/A																		
Social	Commuting and Other users	Increased capacity through the provision of a dual carriageway, together with junction improvements would lead to an improvement in day-to-day reliability whilst also reducing the frequency and impact of traffic incidents. Reliability is also improved by the attraction of traffic from local roads therefore reducing incidents.			<table border="1"> <tr> <td colspan="3">Value of journey time changes (£)</td> <td>441,987,000</td> </tr> <tr> <td colspan="3">Net journey time changes (£)</td> <td></td> </tr> <tr> <td>0 to 2min</td> <td>2 to 5min</td> <td>> 5min</td> <td></td> </tr> <tr> <td>168,639,148</td> <td>98,640,186</td> <td>174,707,666</td> <td></td> </tr> </table>		Value of journey time changes (£)			441,987,000	Net journey time changes (£)				0 to 2min	2 to 5min	> 5min		168,639,148	98,640,186	174,707,666		N/A	435,611,000	Slight Beneficial
	Value of journey time changes (£)			441,987,000																					
	Net journey time changes (£)																								
	0 to 2min	2 to 5min	> 5min																						
	168,639,148	98,640,186	174,707,666																						
	Reliability impact on Commuting and Other users	Delays due to incidents and journey time variability is perceived as an issue for commuters and other users. The scheme would improve reliability by providing additional capacity on the network, improved response times and greater resilience through provision of technology and improved access; and fewer accidents and incidents through the improvement to safety.			Assessment based on comparison of reliability performance of single and dual carriageway sections of the A303		N/A	46,000,000																	
	Physical activity	D062 would reduce severance at approx. 18 Public Rights of Way (PRoW) and cause severance at 10 PRoW. Overall D062 would result in a beneficial effect on physical activity.			N/A		Beneficial	N/A																	
	Journey quality	Loss of views of the WHS including Stonehenge is an adverse effect. However a dualled alignment would improve travellers ability to make good progress along the route and an improvement to the condition of the road network would reduce traveller stress through less frustration, fear of potential accidents and more route certainty.			N/A		Moderate Beneficial	N/A																	
	Accidents	Replacement of existing single carriageway with grade-separated dual carriageway would save about six accidents per year.			Monetised assessment of benefits of changes in accidents using COBALT software		N/A	29,382,700	Slight Beneficial																
	Security	No significant impacts on personal security have been identified at this stage			N/A		Neutral	N/A	Neutral																
Access to services	No impacts identified for public transport services and access to services.			N/A		Neutral	N/A	Neutral																	
Affordability	There is likely to be a slight reduction in vehicle operating costs due to reduced congestion, and a slight increase in vehicle operating costs due to travelling further, although the further distance will be minimal. Overall, the impact on affordability for users will be neutral.			N/A		Neutral	N/A	Neutral																	
Severance	Through realignment of the highway and redistribution of traffic Option D062 would reduce severance within and between several settlements in the vicinity.			N/A		Moderate Beneficial	N/A	Moderate Beneficial																	
Option and non-use values	It is unlikely this scheme will have any impact on Option Values as there is no new provision of public transport services or removal of existing services.			N/A		Neutral	N/A																		
Public Accounts	Cost to Broad Transport Budget	A publicly-funded option is the most likely commercial route to delivery of the scheme. Therefore, at this stage, it is assumed the entire cost of the scheme will be borne by the Transport Budget.			Indicative capital cost estimates provided by Highways England Commercial team. Allowance of tunnel and surface highway operating and maintenance costs included.		N/A	1,050,847,000																	
	Indirect Tax Revenues	The increase in indirect taxation is marginal. There is a minor increase in indirect taxation due to vehicles travelling a slightly greater distance and therefore there is a minor net positive change in fuel duty revenue through increased vehicle operating costs.			Assessed based on traffic model outputs using TUBA software		N/A	12,737,000																	

H.1.3 F010

Appraisal Summary Table		Date produced:	21st Dec 2016	Contact:						
Name of scheme:		A303 Amesbury to Berwick Down			Name	Stephen Bussell				
Description of scheme:		RouteOption F010 is a wholly surface route which runs to the south of and entirely outside the WHS and incorporates a bypass to the south of Winterbourne Stoke and north of Berwick St James. The route option gives an increased journey distance of approximately 4.1km compared to the existing A303 route.			Organisation	AAJV				
					Role	Economics and Business Case Workstream Lead				
Impacts	Summary of key impacts	Assessment								
		Quantitative			Qualitative	Monetary £(NPV)	Distributional 7-pt scale/ vulnerable grp			
Economy	Business users & transport providers	Removal of congestion resulting from lack of capacity at junctions and on existing single carriageway resulting in improvements in journey times and therefore lower transport costs. These are offset by longer route, giving increased vehicle operating costs. Net impact for heavy vehicles is negative.			Value of journey time changes(£)	125,976,000	N/A	78,476,000	Moderate Beneficial	
					Net journey time changes (£)					
		0 to 2min	2 to 5min	> 5min						
			52,248,136	52,281,369	21,446,495					
	Reliability impact on Business users	Increased capacity through the provision of a dual carriageway, together with junction improvements would lead to an improvement in day-to-day reliability whilst also reducing the frequency and impact of traffic incidents.			Assessment based on comparison of reliability performance of single and dual carriageway sections of the A303		N/A	14,600,000		
	Regeneration	The scheme is unlikely to have a significant impact on accessibility or economic activity in either of the identified regeneration areas in central Salisbury, or on areas of deprivation in Salisbury and Wilton. Therefore, a formal assessment has not been undertaken at this stage.			N/A		Neutral	N/A		
	Wider Impacts	Moderate agglomeration benefits are expected, driven particularly by reductions in journey costs between and within Salisbury and West Wiltshire but also due to improved links to the Andover/Test Valley area and beyond to Basingstoke and Newbury in the East and Bath in the West. Very slight benefits are expected to result from an increased labour market participation resulting from reduced commuting costs. Slight benefits expected to result from increased output in imperfectly competitive markets. Assessment based on Wider Impacts guidance may understate total value of wider economic benefits.			Agglomeration £59 m (PVB) Labour market impacts £3m (PVB) Output in imperfectly competitive markets £5 m (PVB)		N/A	66,000,000		
Environmental	Noise	Less than 10 Households are likely to qualify for noise insulation due to road traffic noise from F010. The 10 schools and the library within the noise impact study area are not expected to experience a significant noise change. There would be more properties in the study area that would experience a noise decrease than a noise increase. The monetised benefit of F010 would be significant due to the reduced noise impact of the existing A303 on Amesbury.			~800 Households are likely to experience an increase in day time noise in the last forecast year (2039) ~2800 Households are likely to experience a decrease in day time noise in the last forecast year (2039) ~300 Households are likely to experience an increase in night time noise in the last forecast year (2039) ~500 Households are likely to experience a decrease in night time noise in the last forecast year (2039)		N/A	3,660,000	Large Beneficial	
	Air Quality	The nearest Air Quality Management Areas (AQMAs) are located in Salisbury, approximately 7km south of F010, within the Affected Road Network (ARN). There would be no new exceedances as a result of F010. F010 would change air quality at receptors for NO2/PM10 by: improving 8839/3495, worsening 8473/3686, with no change at 1181/11312 receptors. Overall there would be a net improvement in local air quality for F010 (for PM10 and NO2) as a result of the realignment of the A303 away from sensitive receptors. There would be a negative impact on regional emissions for NOx; F010 would have a significant increase in NOx emissions in the local air quality study area due to increases in vehicle flows and the distance travelled.			Local Air Quality Assessment Score: PM10: -49 NO2: -201 Regional Emissions (Opening Year) NOx: +1560 tonnes/yr.		N/A	PM10 NPV: +343,000 NOx NPV: -831,000 Total value of change in air quality: -490,000	Slight Adverse	
	Greenhouse gases	The change in non-traded carbon dioxide emissions in the opening year 2024 would be 10,738 tCO2e. The assessment is caveated as it is based solely on the local traffic model as SWRM is not available until PCF Stage 2.			Change in non-traded carbon over 60y (CO2e)		1,175,655	N/A	-53,875,360	
					Change in traded carbon over 60y (CO2e)		0			
		Landscape	Overall it is considered that this 21.5km route would affect the landscape as a result of Very Large Adverse impacts identified on the Upper Avon Narrow Chalk River Valley and Large Adverse impacts identified on the Larkhill and Winterbourne Chalk Downland and Till Narrow Chalk River Valley Landscape Character Areas. This includes the introduction of a highly visual and intrusive feature as the route is elevated and aligned against the grain of the existing landscape, and at complete variance with the landform, scale and pattern of the landscape as it passes through the Upper Avon Narrow Chalk River Valley.			N/A		Very Large Adverse	N/A	
		Townscape	It is anticipated that there would not be any notable impacts on townscape as a result of F010.			N/A		Neutral	N/A	
		Historic Environment	Historic Environment: The settings of many scheduled monuments and listed buildings within and around the WHS would benefit from the removal of the existing A303, including Stonehenge and the Avenue. Overall, within and outside the WHS, F010 would result in 132 beneficial impacts (22 very large, 49 large, 29 moderate, 32 slight,) and 161 adverse impacts (4 large, 36 moderate, 121 slight). Outside of the WHS, this includes harm to other designated assets: scheduled monuments, listed buildings, conservation areas; and the loss of non-designated, known and potential archaeology along its length. Overall whilst the harm to the other assets does weight slightly against the benefits of F010, there are more very large and large benefits and the scheme is still considered to deliver a Large Beneficial Effect.			N/A		Large Beneficial	N/A	
			Stonehenge, Avebury and Associated Sites World Heritage Site (WHS): This option would remove the A303 from the WHS providing a significant improvement for whole of the WHS and the immediate area around Stonehenge. The route would also remove the severance of the Avenue; these are very substantive benefits for the WHS. Overall, the removal of the A303 and associated traffic would result in a Large Beneficial Impact on the WHS.			N/A		Large Beneficial	N/A	
		Biodiversity	The two new river crossing structures would result in direct adverse impacts to the River Avon SAC (including the River Till) and River Avon System SSSIs. Additionally, the scale of this 21.5km route option would result in a significant loss of priority habitats and associated biodiversity and it is unlikely this can be compensated within the scheme.			N/A		Very Large Adverse	N/A	
		Water Environment	Most of the effects associated with F010 (shading by bridges, increased flood risk and changes in flow volume and water quality in both groundwater and surface water) would be eliminated by mitigation and design. However F010 crosses 2.4km of Source Protection Zone 2 (SPZ2) and represents a significant potential risk to Chalk Aquifer that would require specific mitigation measures above standard practice.			N/A		Moderate Adverse	N/A	
Social	Commuting and Other users	Removal of congestion resulting from lack of capacity at junctions and on existing single carriageway, producing improvements in journey times. These are offset by longer route, giving increased vehicle operating costs.			Value of journey time changes(£)		197,186,000	N/A	125,528,000	Moderate Beneficial
					Net journey time changes (£)					
		0 to 2min	2 to 5min	> 5min						
			-8,915,558	139,310,237	66,791,321					
		Reliability impact on Commuting and Other users	Increased capacity through the provision of a dual carriageway, together with junction improvements would lead to an improvement in day-to-day reliability whilst also reducing the frequency and impact of traffic incidents. Reliability is also improved by the attraction of traffic from local roads therefore reducing incidents.			Assessment based on comparison of reliability performance of single and dual carriageway sections of the A303		N/A	46,000,000	
		Physical activity	F010 would directly increase severance at approximately 16 Public Rights of Way (PRoW) and indirectly cause severance at a further 9. While F010 would reduce severance at 8 PRoW, there would be an overall negative effect on physical activity.			N/A		Adverse	N/A	
		Journey quality	Loss of views of the Stonehenge WHS and loss of access to Solstice Park and Countess Roundabout services are adverse effects. However a dualled alignment would improve travellers ability to make good progress along the route and an improvement to the condition of the road network would reduce both fear of potential accidents and route uncertainty.			N/A		Moderate Beneficial	N/A	
		Accidents	Replacement of existing single carriageway with grade-separated dual carriageway over longer route would save about two accidents per year.			Monetised assessment of benefits of changes in accidents using COBALT software		N/A	13,727,100	Moderate Beneficial
		Security	No significant impacts on personal security have been identified at this stage.			N/A		Neutral	N/A	Neutral
		Access to services	No impacts identified for public transport services and access to services.			N/A		Neutral	N/A	Neutral
	Affordability	There is likely to be a slight reduction in vehicle operating costs due to reduced congestion, but this is likely to be outweighed by the increase in vehicle operating costs due to travelling further.			N/A		Slight Adverse	N/A	Moderate adverse	
	Severance	Realignment of the highway and the provision of a grade-separated junction would reduce severance between some settlements but introduce new instances of severance between other settlements.			N/A		Moderate Adverse	N/A	Large Adverse	
	Option and non-use values	It is unlikely this scheme will have any impact on Option Values as there is no new provision of public transport services or removal of existing services.			N/A		Neutral	N/A		
Public Accounts	Cost to Broad Transport Budget	A publicly-funded option is the most likely commercial route to delivery of the scheme. Therefore, at this stage, it is assumed the entire cost of the scheme will be borne by the Transport Budget.			Indicative capital cost estimates provided by Highways England Commercial team. Allowance for surface highway operating and maintenance costs included.		NA	652,504,000		
	Indirect Tax Revenues	There is an increase in indirect taxation due to vehicles travelling a greater distance and therefore there is a significant net positive change in fuel duty revenue through increased vehicle operating costs. This is approximately 4 times above the tunnel options.			Assessed based on traffic model outputs using TUBA software		N/A	44,820,000		

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The Technical Assessment Report details the assessment of options leading up to consultation.