

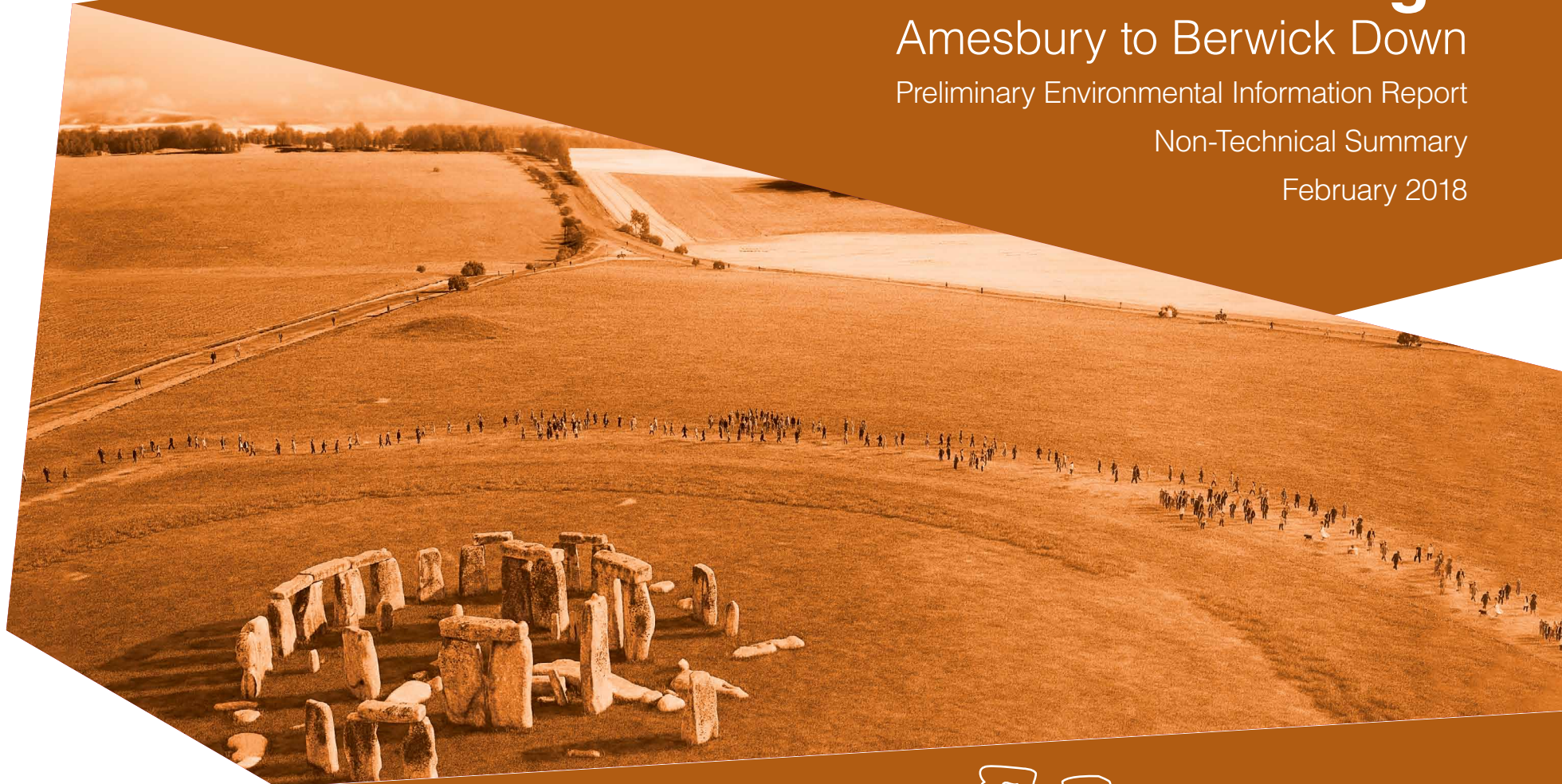
A303 Stonehenge

Amesbury to Berwick Down

Preliminary Environmental Information Report

Non-Technical Summary

February 2018





Introduction

Highways England proposes to improve the A303 at Stonehenge by providing a dual two-lane carriageway between Amesbury and Berwick Down in Wiltshire (the proposed scheme). The proposed scheme will help unlock economic growth in the South West by improving journey reliability, increasing safety and improving connectivity with neighbouring regions, while protecting and enhancing the environment.

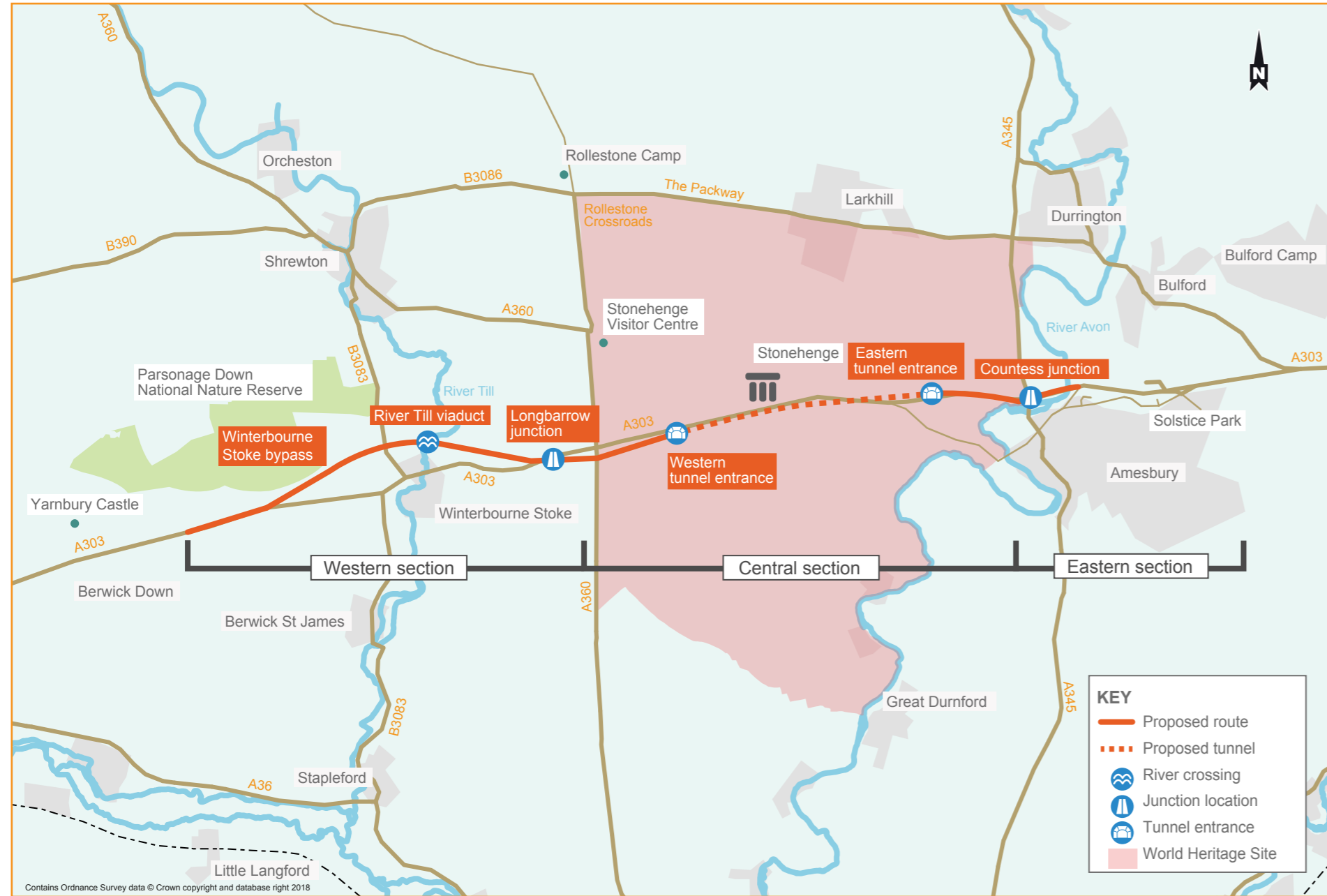
This proposal is a “Nationally Significant Infrastructure Project” under the Planning Act 2008, which means that an application will need to be made for permission to build and operate the proposed scheme. The permission is called a Development Consent Order (DCO).

Before an application for a DCO is submitted, the local community and other stakeholders must be formally consulted on the proposals, including a description of the proposed scheme, the likely significant environmental effects based on the preliminary environmental information available at the time, measures to avoid or reduce such effects and the alternatives considered. This is to support consultees in developing an informed view of the likely significant environmental effects of the proposed scheme.

As well as undertaking this consultation, we are continuing to gather environmental information, identifying the potential impacts of the proposed scheme, and developing measures to avoid or reduce adverse impacts - a process known as environmental impact assessment (EIA).

While the EIA is ongoing, we have prepared a Preliminary Environmental Information Report (PEI Report) to describe the environmental setting and currently anticipated impacts of the proposed scheme on the environment. The PEI Report has been developed for the purposes of the above consultation and presents currently available information from the ongoing EIA. This document provides a summary of the PEI Report in non-technical language.

The information contained within the PEI Report is preliminary and the findings will be developed further in the Environmental Statement (ES) to reflect the evolution of the design of the proposed scheme, informed by the feedback from the consultation, and the ongoing EIA process. The ES, presenting the full results of the EIA, will be submitted with the application for the DCO.



The project

Environmental context

The proposed scheme would be located mostly within open, rolling countryside.

At the western end, the proposed scheme would pass just to the south of the Parsonage Down National Nature Reserve (NNR) and to the north of the village of Winterbourne Stoke, crossing the River Till which is a Site of Special Scientific Interest (SSSI) and a Special Area of Conservation (SAC).

It would then pass through the Stonehenge, Avebury and Associated Sites World Heritage Site (WHS). Located within the WHS and to the south of the proposed scheme is the Normanton Down RSPB Reserve.

At the eastern end, the proposed scheme would follow the line of the existing A303, passing to the north of the historic town of Amesbury and across the River Avon which is also a SSSI and SAC.

The proposed scheme

The proposed scheme would be approximately 8 miles (nearly 13 kilometres) long and would comprise the construction of a new dual two-lane carriageway between Amesbury and Berwick Down with the following key features:

- a bypass to the north of Winterbourne Stoke with a viaduct over the River Till valley;
- grassland habitat creation that would allow extension of the Parsonage Down NNR;
- a new Longbarrow junction with the A360 to the west of and outside the WHS, with the A303 passing under the junction;
- a section through the WHS with a twin-bore tunnel past Stonehenge at least 1.8 miles (approximately 2.9km) long;
- an upgraded junction with the A345 at Countess Roundabout to the north of Amesbury, with the A303 passing over the junction;
- the conversion of the existing A303 through the WHS into a route for walking, cycling and horse riding; and
- new 'green bridges' at various points along the length of the scheme to connect existing habitats and allow the movement of wildlife, maintain existing agricultural access and provide crossings for existing and new bridleways and public footpaths.

These features are illustrated on the proposed scheme plans presented in the centre of this document divided into sections as shown on the page opposite.

The Applicant

Highways England is the Applicant, and the Strategic Highways Company as defined in the Infrastructure Act 2015, and is charged with modernising and maintaining England's strategic road network, as well as running the network and keeping traffic moving.

Options under consideration

Options are under consideration for five elements of the scheme, as given below:

- River Till viaduct – either with an open parapet or with a barrier attached to the parapet for noise and visual screening.
- Green bridge on the western boundary of the WHS – located either on the line of the existing A360, or further eastwards within the WHS;
- Approach to western tunnel entrance – cutting with either vertical retaining walls for the lower two thirds and rolling grass slope above, or grassed slopes for the full depth.
- Western tunnel entrance – with grassed slopes or a narrow steep sided cutting, as above, or with a canopy which would either be fully grassed over or including ventilation outlets.
- Countess Roundabout flyover – either comprising two single span bridges, with the centre of the roundabout filled and landscaped, or a multi-span viaduct across an open roundabout.

These options, and their potential environmental implications, are summarised in the PEI Report. The options are also explained, with the assistance of images, in the consultation booklet.

Alternatives

Proposals for the improvement of the A303 between Amesbury and Berwick Down have been the subject of extensive study and consultation since 1991. The process of options identification and route selection leading to the proposed scheme is summarised in section 3 of the PEI Report. The process followed the following stages:

- Corridor identification and initial sifting of corridors.
- Development of route options within preferred corridors.
- Route options appraisal and sifting to identify options to take forward for further appraisal.
- The selection of route options, which were taken to non-statutory public consultation in January/March 2017.
- The selection of the Preferred Route which was announced by the Secretary of State in September 2017.

The Preferred Route was a modification of the route options taken to non-statutory public consultation, to take into account consultation responses. The Preferred Route forms the basis of the proposed scheme.

Details of the options identification and selection process leading to the route options taken to non-statutory public consultation can be found in the **Technical Appraisal Report**. Details of the development of the Preferred Route from the options taken to non-statutory public consultation can be found in the **Scheme Assessment Report**. Both reports are available at www.highways.gov.uk/A303Stonehenge/consultation.

The environmental impact assessment

Under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017, the proposed scheme is defined as the type and scale of development that automatically requires an EIA. Accordingly, an EIA is being undertaken to meet the requirements of the relevant planning policy and legislation, and cover the effects of the proposed scheme on the environment.

The EIA considers impacts during the construction and operation of the scheme. The construction phase assessment addresses both the temporary activities involved in building the scheme and the subsequent permanent presence of the scheme once constructed; where relevant, these temporary and permanent effects are described separately below. The operational assessment considers the situation when the scheme is being used by traffic.

During its construction, most of the proposed scheme's potential adverse impacts would be avoided or mitigated by the implementation of industry standard practice and control measures, which would be contained within a Construction Environmental Management Plan (CEMP).

Further work continues to be undertaken as part of the EIA process to confirm the preliminary findings presented below. The final assessment of environmental impacts will be presented in the ES that will be submitted with the DCO application. The application will also include a draft of the CEMP.



Chalk grassland flora

Air quality

Baseline

Air quality in the area around the proposed scheme is considered to be good. This is confirmed by the fact that there are no Air Quality Management Areas (AQMAs) close to the proposed scheme, with the nearest being in Salisbury, approximately 6 miles (approximately 10 km) south of Amesbury. AQMAs are areas which the local authority has identified as requiring management to achieve desired air quality objectives. Notwithstanding this, air quality within Winterbourne Stoke and the northern edge of Amesbury is currently affected by traffic on the A303.



Traffic queuing through Winterbourne Stoke



Congestion at Countess junction

Construction

Without mitigation, construction of the proposed scheme would temporarily impact air quality as a result of dust from construction activities, such as earth moving and excavations, and emissions from construction traffic and equipment/plant. Mitigation measures in the CEMP would include those for dust suppression, control and use of equipment/plant and construction traffic management. These would minimise the temporary impacts during construction activities.

Preliminary construction assessment:

- With the implementation of the above mitigation measures, no likely significant effects are anticipated.

Operation

During operation there could be impacts on air quality as a result of changes in vehicle flows along the scheme and the wider road network once the proposed scheme is open. Once the proposed scheme is operational, traffic would be moved further away from the village of Winterbourne Stoke, but would remain on the existing alignment past Amesbury, although at a higher level. Traffic would be within a tunnel or a deep cutting through the western part of the WHS. These design components would minimise the air quality impacts during operation

Preliminary operational assessment:

- No likely significant effects are anticipated.
- Air quality is likely to be improved through Winterbourne Stoke once the proposed scheme is in use.



Shrewton village

Cultural heritage

Baseline

Cultural heritage includes archaeology, historic buildings/structures and historic landscapes including parks and gardens. The existing A303 runs through the WHS, passing 165m from Stonehenge itself, with significant adverse effects on important features such as Stonehenge and the Avenue. There are also heritage assets such as burial mounds (or 'barrows') located beyond the boundary of the WHS.

Construction

The construction activities would lead to temporary adverse effects on the setting of a number of heritage assets through visual intrusion and noise. Mitigation measures included in the CEMP would include sensitive siting and screening of construction compounds and material storage areas. These would minimise the temporary impacts during construction activities.

The presence of the proposed scheme would result in the permanent partial or total removal of non-designated heritage features. Suitable archaeological mitigation would be undertaken to record these assets prior to construction.

The proposed scheme would have likely significant permanent adverse effects on the setting of listed buildings in the vicinity of Countess Roundabout. The proposed scheme would remove or reduce existing significant adverse impacts on a number of important heritage assets, including those within the central part of the WHS, through the route alignment.

Preliminary construction assessment:

- Construction activities would have likely significant temporary adverse effects on the setting of monuments within and outside the WHS.
- Construction activities would have likely significant temporary adverse effects on the setting of listed buildings in the vicinity of Countess Roundabout.
- The proposed scheme would have likely significant permanent adverse effects due to the loss or truncation of non-designated assets, mostly outside the WHS.
- The proposed scheme would have likely significant permanent adverse effects on the setting of listed buildings in the vicinity of Countess Roundabout.
- The proposed scheme would have likely significant permanent beneficial effects on the setting of monuments within the WHS, including Stonehenge.
- The proposed scheme would have likely significant permanent beneficial effects due to the removal of severance of the Avenue and of relationships between monuments within the WHS.

Operation

The removal of the traffic along the existing A303 from much of the Stonehenge landscape would improve the setting of heritage assets within the WHS, including Stonehenge itself. This removal of traffic and conversion of the existing A303 through the WHS into a byway for walking, cycling and horse riding, would improve public access to the WHS.

Preliminary operational assessment:

- Operation of the proposed scheme would have likely significant beneficial effects on the setting of monuments within the central section of the WHS due to the removal of traffic.
- Operation of the proposed scheme would have likely significant beneficial effects on public access to the WHS due to the removal of severance.

Outstanding Universal Value

Preliminary assessment:

The proposed scheme would maintain the Outstanding Universal Value (OUV) of the WHS, which is the basis for the site being classed as a WHS.



Existing view of Stonehenge



Future view of Stonehenge

Landscape and Visual Effects

Baseline

The proposed scheme would be situated in an open rolling landscape, with small towns, villages and farms within a pattern of ridgelines and valleys including the River Till valley. The land use is predominantly agricultural, with areas of residential and military properties and tourism. The existing A303 is a busy transport link which has a significant adverse effect on the character and tranquillity of an otherwise largely rural landscape.

Construction

Without mitigation, construction activities could have temporary impacts on the local landscape and on views for users of public rights of way and local roads, and on residential properties in the vicinity of the proposed scheme. Measures to mitigate the visual impacts of the construction activities would include the sensitive siting of compounds and use of soil storage mounds to screen views.

Earthworks for landscape integration, and the establishment of advanced planting, would mitigate the permanent impacts of the proposed scheme. Proposals to mitigate the landscape and visual impacts of the viaduct over the River Till valley would include shaping the earthworks to integrate the viaduct with the existing landform and reducing the size and scale of the viaduct.

Proposals to mitigate the landscape and visual impacts of the Countess Roundabout flyover include setting the new flyover at the minimum possible height and the provision of planting within the roundabout to reduce the visual impact from the north and south approaches to the junction. The alternative of having an open viaduct structure is also being considered.

Preliminary construction assessment:

- Construction activities would have likely significant temporary adverse effects on the rural landscape, particularly the River Till valley and at Longbarrow junction.
- Construction activities would have likely significant temporary adverse visual effects on residents of Amesbury and Winterbourne Stoke, visitors to the WHS and users of the public rights of way (PRoW) network, in particular in the vicinity of the River Till valley.
- The proposed scheme would have likely significant permanent adverse effects on the landscape of the River Till valley.
- The proposed scheme would have likely significant permanent beneficial effects on the pattern, tranquillity and connectivity of the landscape within the WHS.



Existing view of western part of World Heritage Site



Future view of western part of World Heritage Site

Operation

Using new landform to screen vehicles, creating chalk grassland and providing enhanced opportunities for recreational access would minimise adverse effects associated with the operation of the proposed scheme. Tunnelling of the A303 through the central section of the WHS would remove vehicles from part of the WHS landscape and allow the landscape to be reconnected.

Preliminary operational assessment:

- Operation of the proposed scheme would have likely significant adverse visual effects on users of the PRow network in the vicinity of the River Till valley.
- Operation of the proposed scheme would have likely significant beneficial effects on the townscape within Winterbourne Stoke.
- Operation of the proposed scheme would have likely significant beneficial visual effects on residents of Winterbourne Stoke, visitors to the WHS, and users of the PRow network within the WHS.



Proposed viaduct over the River Till valley

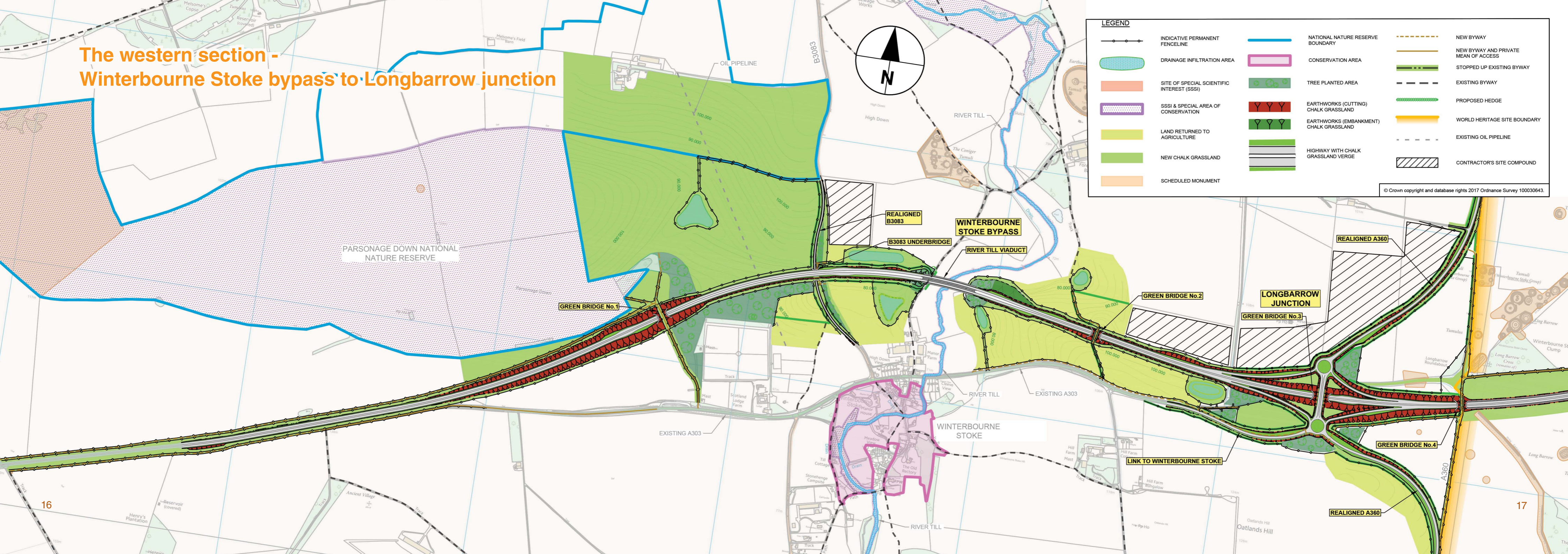


Proposed Longbarrow junction



Proposed Countess junction

The western section - Winterbourne Stoke bypass to Longbarrow junction



LEGEND

	INDICATIVE PERMANENT FENCELINE		NATIONAL NATURE RESERVE BOUNDARY		NEW BYWAY
	DRAINAGE INFILTRATION AREA		CONSERVATION AREA		NEW BYWAY AND PRIVATE MEAN OF ACCESS
	SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)		TREE PLANTED AREA		STOPPED UP EXISTING BYWAY
	SSSI & SPECIAL AREA OF CONSERVATION		EARTHWORKS (CUTTING) CHALK GRASSLAND		EXISTING BYWAY
	LAND RETURNED TO AGRICULTURE		EARTHWORKS (EMBANKMENT) CHALK GRASSLAND		PROPOSED HEDGE
	NEW CHALK GRASSLAND		HIGHWAY WITH CHALK GRASSLAND VERGE		WORLD HERITAGE SITE BOUNDARY
	SCHEDULED MONUMENT		EXISTING OIL PIPELINE		CONTRACTOR'S SITE COMPOUND

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PARSONAGE DOWN NATIONAL NATURE RESERVE

REALIGNED B3083

B3083 UNDERBRIDGE

WINTERBOURNE STOKE BYPASS

RIVER TILL VIADUCT

GREEN BRIDGE No.1

GREEN BRIDGE No.2

LONGBARROW JUNCTION

GREEN BRIDGE No.3

REALIGNED A360

EXISTING A303

WINTERBOURNE STOKE

EXISTING A303

LINK TO WINTERBOURNE STOKE

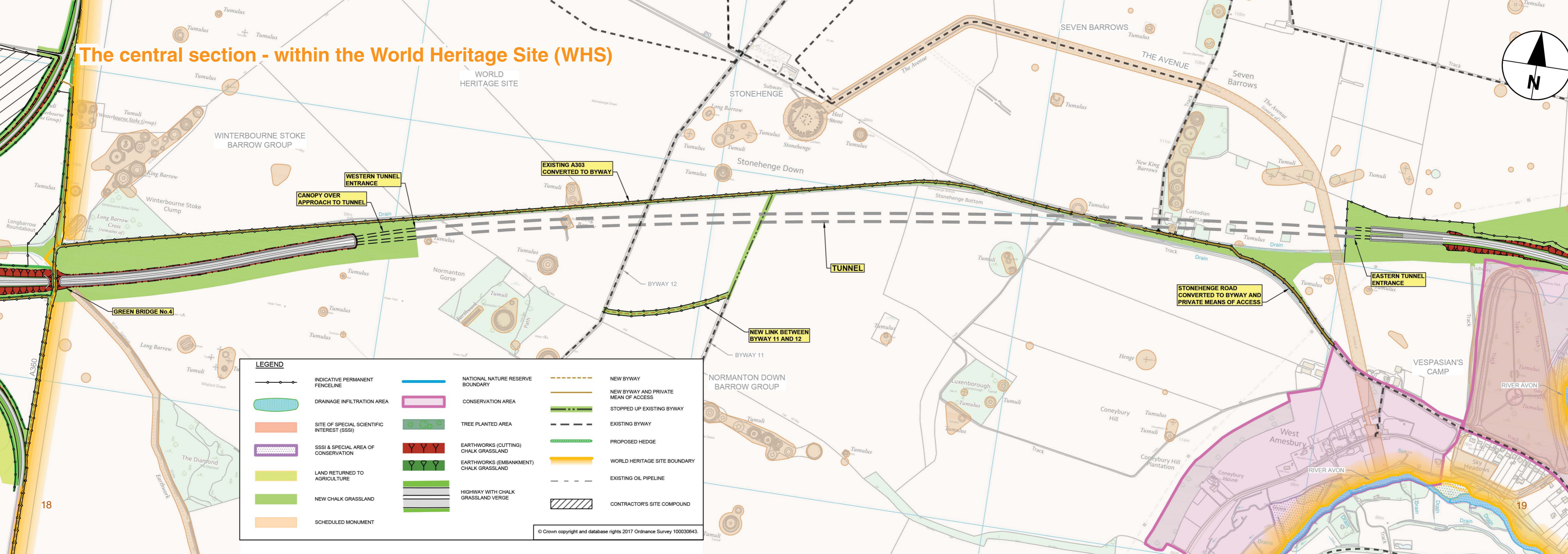
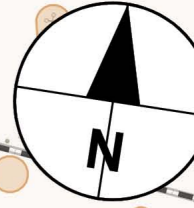
GREEN BRIDGE No.4

REALIGNED A360

17

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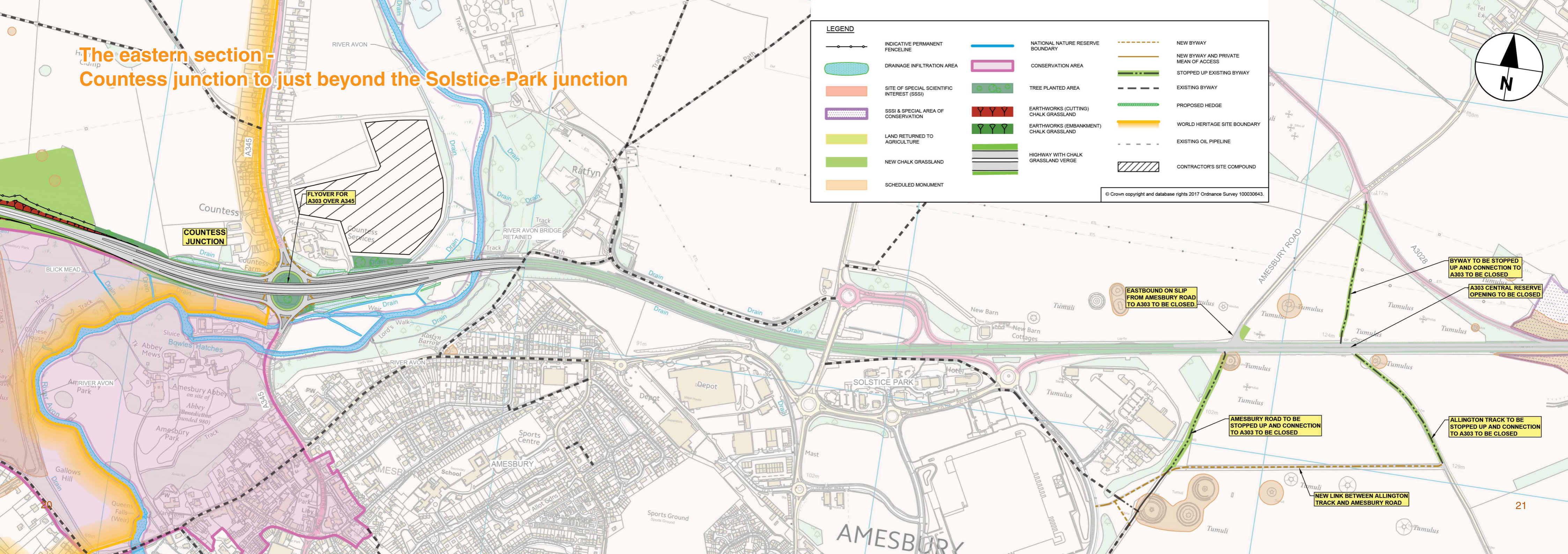
The central section - within the World Heritage Site (WHS)



LEGEND			
	INDICATIVE PERMANENT FENCELINE		NATIONAL NATURE RESERVE BOUNDARY
	DRAINAGE INFILTRATION AREA		CONSERVATION AREA
	SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)		TREE PLANTED AREA
	SSSI & SPECIAL AREA OF CONSERVATION		EARTHWORKS (CUTTING) CHALK GRASSLAND
	LAND RETURNED TO AGRICULTURE		EARTHWORKS (EMBANKMENT) CHALK GRASSLAND
	NEW CHALK GRASSLAND		HIGHWAY WITH CHALK GRASSLAND VERGE
	SCHEDULED MONUMENT		EXISTING OIL PIPELINE
			WORLD HERITAGE SITE BOUNDARY
			EXISTING BYWAY
			PROPOSED HEDGE
			NEW BYWAY
			NEW BYWAY AND PRIVATE MEAN OF ACCESS
			STOPPED UP EXISTING BYWAY
			CONTRACTOR'S SITE COMPOUND

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The eastern section - Countess junction to just beyond the Solstice Park junction



COUNTESS JUNCTION

FLYOVER FOR A303 OVER A345

EASTBOUND ON SLIP FROM AMESBURY ROAD TO A303 TO BE CLOSED

BYWAY TO BE STOPPED UP AND CONNECTION TO A303 TO BE CLOSED

A303 CENTRAL RESERVE OPENING TO BE CLOSED

AMESBURY ROAD TO BE STOPPED UP AND CONNECTION TO A303 TO BE CLOSED

ALLINGTON TRACK TO BE STOPPED UP AND CONNECTION TO A303 TO BE CLOSED

NEW LINK BETWEEN ALLINGTON TRACK AND AMESBURY ROAD

LEGEND

	INDICATIVE PERMANENT FENCELINE		NATIONAL NATURE RESERVE BOUNDARY		NEW BYWAY
	DRAINAGE INFILTRATION AREA		CONSERVATION AREA		NEW BYWAY AND PRIVATE MEAN OF ACCESS
	SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)		TREE PLANTED AREA		STOPPED UP EXISTING BYWAY
	SSSI & SPECIAL AREA OF CONSERVATION		EARTHWORKS (CUTTING) CHALK GRASSLAND		EXISTING BYWAY
	LAND RETURNED TO AGRICULTURE		EARTHWORKS (EMBANKMENT) CHALK GRASSLAND		PROPOSED HEDGE
	NEW CHALK GRASSLAND		HIGHWAY WITH CHALK GRASSLAND VERGE		WORLD HERITAGE SITE BOUNDARY
	SCHEDULED MONUMENT				EXISTING OIL PIPELINE
					CONTRACTOR'S SITE COMPOUND

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Biodiversity

Baseline

There are several important designated sites in the vicinity of the proposed scheme, including the River Avon Special Area of Conservation (SAC), Salisbury Plain SAC and Special Protection Area (SPA), both of European importance, and the River Till SSSI. The River Till SSSI also forms part of the River Avon SAC. Other important nearby sites include the Parsonage Down SSSI and National Nature Reserve (NNR) and the RSPB reserve at Normanton Down.

Construction

Without mitigation, temporary impacts to the River Till SSSI and SAC could arise during the construction of the proposed scheme. Mitigation measures in the CEMP would include measures to control run-off, spillages and to avoid physical intrusion on the River Till SSSI and SAC. During construction there is a need to create a temporary crossing of the River Till valley for the movement of construction plant. To minimise adverse impacts this crossing would be across a temporary bridge raised above the valley floor with supports located outside the designated area of the SAC. Surveys have been undertaken for a wide range of plant and animal species. Construction activities are unlikely to result in significant effects on these species with the exception of Stone Curlew, a rare bird, which breeds throughout the area.

The proposed scheme avoids the SPA, NNR and RSPB reserve and there would be no direct habitat loss from the SACs and SSSIs. Without mitigation, there could be impacts arising from the shading caused by

the new viaduct across the River Till, which could affect the vegetation under the viaduct. The design of the viaduct would balance minimising visual impact with minimising shading of the underlying ground. This would involve building the viaduct as a 'twin deck' structure with a gap between the carriageways and setting the bridge at an optimum height to allow light to pass to the underlying valley floor. This design would maintain vegetation beneath the bridge and is likely to avoid any significant adverse effects.

The proposed scheme includes wider measures to mitigate impacts or enhance existing biodiversity, in particular the creation of a new area of chalk grassland habitat adjacent to Parsonage Down NNR, using chalk from the tunnel excavations.

Preliminary construction assessment:

- Construction activities would have likely significant temporary adverse effects on Stone Curlew.
- The proposed scheme would have likely significant permanent beneficial effects on chalk grassland habitat in the vicinity of Parsonage Down.
- The integrity of the River Avon SAC (incorporating the River Till SAC) and the Salisbury Plain SAC and SPA would not be adversely affected by the proposed scheme.

Operation

The proposed scheme includes measures to mitigate severance impacts caused by traffic on the new road. These comprise 'green bridges' over the new road to create links between existing habitats and allow the movement of wildlife across the scheme.

Preliminary operational assessment:

- Due to the increased public access across the WHS enabled by the proposed scheme, there would be likely significant local adverse effects on Stone Curlew south of the A303.
- The proposed scheme would have likely significant beneficial effects on ecological connectivity due to the tunnel and the inclusion of green bridges.



Existing fields adjacent to Parsonage Down National Nature Reserve



An example of a green bridge



Proposed new chalk grassland adjacent to Parsonage Down National Nature Reserve

Noise and vibration

Baseline

The area is predominantly rural in nature. Road traffic noise from the A303 affects the setting of the WHS, particularly in the vicinity of Stonehenge. The existing A303 passes close to residential properties at Amesbury and Winterbourne Stoke and the high existing noise levels along the A303 through Winterbourne Stoke are reflected in the designation of two 'Noise Important Areas' (areas identified by the government as being most exposed to noise) in the vicinity.

Construction

There could be temporary noise and vibration impacts related to proposed scheme construction activities as well as the related construction traffic. Measures within the CEMP to reduce noise and vibration impacts would include implementation of a traffic management plan, selection of quiet and low vibration equipment, optimal location of equipment on site to minimise noise disturbance, the use of enclosures for stationary equipment, and the use of temporary screening hoarding/bunds. Vibration effects from construction activities such as the piling for the foundations of the structures close to properties at Countess Roundabout would be minimised through the use of appropriate low vibration piling techniques, such as bored piling. Construction activities would be subject to noise limits and working hours agreed with Wiltshire Council's Public Health and Public Protection team.

Tunnel construction would be a 24 hour activity, seven days per week. However, this activity would be located remote from residential properties and either underground or within the deep cuttings of the new road. The associated surface activities to support the tunnelling works, located to the west of the tunnel and outside of the WHS, would be located as far from residential properties as reasonably practicable. Vibration effects from tunnel construction on residential and heritage receptors are not likely to be significant because of the construction techniques that would be used and the depth at which the tunnel would be constructed.

Preliminary construction assessment:

- Construction activities would have likely significant temporary adverse noise effects for nearby residential properties in close proximity to the works, such as the edge of Amesbury and the northern edge of Winterbourne Stoke.
- Significant adverse vibration effects are considered unlikely.

Operation

Once operational, changes in the noise environment would arise from changes in the road layout which alter the distance between road traffic and sensitive receptors such as residential properties (e.g. in Winterbourne Stoke and Amesbury) and users of PRow (e.g. in the WHS and River Till valley). Changes in noise levels would also be associated with changes in traffic flows, composition and speed on the local road network.

Noise reduction measures would be included within the proposed scheme such as the selection of the vertical and horizontal alignment, the use of noise screening/earthworks and the use of low noise surfacing. The removal of the surface section of the A303 through the WHS and the relocation of much of this section of road into tunnel and deep cutting would significantly reduce road traffic noise levels in the vicinity of Stonehenge and much of this part of the WHS.

With regard to the northern edge of Amesbury, while increased traffic flows on the A303 and raising the mainline on a flyover would be likely to increase noise, this would be largely offset by the re-routing of most of the traffic that currently travels at the lower roundabout level, and the screening effect of the earthworks within and approaching the roundabout. Consequently, it is unlikely there would be significant adverse noise effects for residents of Amesbury.

Preliminary operational assessment:

- Operation of the proposed scheme would have likely significant adverse noise effects for properties on the northern edge of Winterbourne Stoke closest to the section of the A303 which is realigned to the north of the village.
- Operation of the proposed scheme would have likely significant beneficial noise effects for residents of Winterbourne Stoke located in close proximity to the existing A303 through the centre of the village.
- Operation of the proposed scheme would have likely significant beneficial noise effects for visitors to the WHS.
- Significant noise effects for residents of Amesbury are not anticipated.

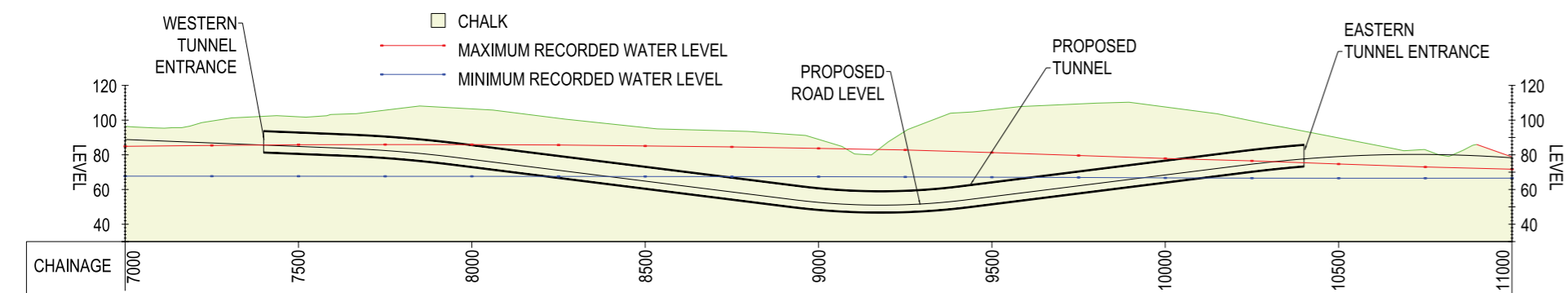


Heavy traffic on the existing A303

Geology and soils

Baseline

The underlying geology across the proposed scheme is chalk, including localised phosphatic chalk within the Stonehenge Bottom area. Overlying deposits include silts, sands, gravels and peat within the River Avon and River Till valleys. Limited areas of historic fill material have been identified in areas of previous and existing development and along existing highways. A number of possible sources of contamination have been identified including former military land (RAF Oatlands Hill and RAF Stonehenge), the current Countess Service Station, petrol station, light industry, former railway lines and a high pressure oil pipeline.



Cut away ground section along the tunnel route

Construction

Without mitigation and the implementation of adequate control measures, there is the potential for contaminants from the above sources to enter groundwater, should they be disturbed during construction of the proposed scheme. The CEMP would include measures for the identification, treatment, re-use and management of arisings during the construction works, including the phosphatic chalk. Measures would also be included to limit the potential for dispersal and accidental releases of potential contaminants, dusts from soil and uncontrolled run-off to occur during construction. The CEMP would also establish procedures for dealing with unexpected soil or groundwater contamination that may be encountered.

Preliminary construction assessment:

- With the mitigation measures in place, no significant adverse effects are considered likely during the construction of the proposed scheme.
- Construction of the proposed scheme could have beneficial effects due to the remediation of sources of contamination.

Operation

Operation of the proposed scheme would not include any activities that are likely to have an impact on geology and soils.

Preliminary operational assessment:

- No significant effects are considered likely during the operation of the proposed scheme.

Road drainage and the water environment

Baseline

The surface water environment includes the River Till and River Avon and their associated floodplains. The proposed scheme would cross the River Till on a new viaduct but would cross the River Avon on an existing bridge. Groundwater is contained within the chalk which underlies the proposed scheme; the chalk is designated as a Principal aquifer (a rock that readily allows the storage and flow of groundwater). The majority of the proposed scheme would be built in areas of no or very low probability of flooding although localised areas, such as the River Till valley, have a higher risk of flooding.

Construction

Without mitigation, the potential impacts of the construction activities include spillages or sediment run-off causing pollution and risk of contamination to surface water and groundwater, localised dewatering of aquifers and worsening flood risk. The CEMP would include measures to mitigate any potential adverse effects on the water environment during construction. These would include pollution control measures such as emergency spill procedures/kit and the approach to managing storage areas and stockpiles.

Potential effects on groundwater would be mitigated by minimising any need for groundwater extraction from the aquifers as part of the construction process. The tunnel would be constructed using a tunnel boring machine or similar technology that minimises the need for dewatering to facilitate construction. Where groundwater extraction

is required, water would be returned to the aquifers as close as practicable to the extraction point to minimise changes to flow regime.

Without mitigation the proposed scheme could lead to changes to groundwater levels and flows as a result of the presence of the tunnel, and the presence of new structures such as the River Till crossing could increase flood risk. The proposed scheme is being designed to minimise impacts on groundwater flows. To minimise flood risk, the crossing over the River Till would be an open viaduct structure designed to avoid the river channel and produce minimal obstruction to flows across the floodplain.

Preliminary construction assessment:

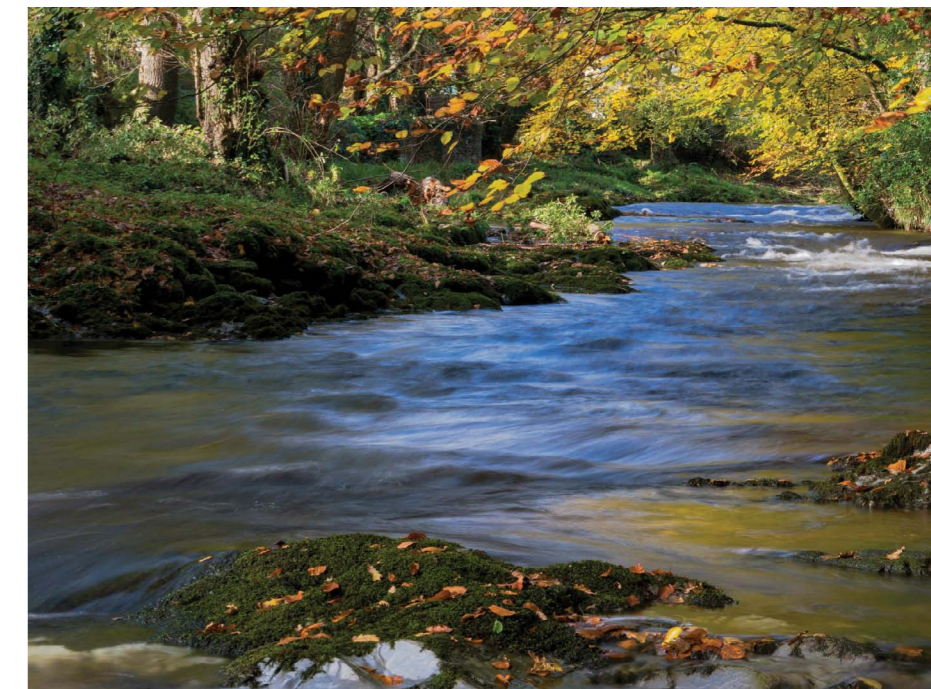
- With the implementation of the CEMP and the design measures above there would be no likely significant temporary adverse effects during construction activities.
- The proposed scheme would have no likely significant permanent adverse effects.
- The integrity of the River Avon SAC (incorporating the River Till SAC) would not be adversely affected by the proposed scheme.

Operation

Without mitigation, operation of the road could lead to pollution impacts on surface water and groundwater from road run-off. Road drainage for the proposed scheme would generally be managed by a piped drainage system that would then discharge into a series of road drainage infiltration areas to provide treatment before allowing water to gradually soak into the ground or flow into a watercourse. This approach would control pollution from road run-off to higher standards than for the current road.

Preliminary operational assessment:

- No likely significant effects are anticipated.



The River Avon

Materials

Baseline

If off-site disposal is required for materials generated during construction of the proposed scheme, suitable quarries and landfill sites have been identified in Wiltshire and the surrounding counties.

Construction

Without mitigation, construction of the proposed scheme could result in temporary reduction in material resources available within the relevant markets. Opportunities to re-use material resources would be sought where practicable and waste would be prevented and designed out where possible. The main type of material generated during construction would be chalk and much of this would be used directly 'as excavated' in the construction of the embankments and landscaping works for the proposed scheme.

Approximately 1 million cubic metres of chalk would be produced from tunnel excavations, which would undergo processing as part of the tunnelling works, to produce a material suitable for re-use. The proposed scheme would use this material for essential landscaping integration and to create new chalk grassland and other wildlife habitats in an area to the east of Parsonage Down NNR.

Preliminary construction assessment:

The proposed scheme would minimise the amount of material that would need to be taken to off-site disposal sites. This would avoid the likely significant adverse noise and air quality impacts associated with the transportation of these large quantities of materials to disposal sites.

Operation

Material use and waste generation is expected to be very small during operation of the proposed scheme, with no significant effects expected. Operational waste and materials have consequently been scoped out of the assessment.

People and communities

Baseline

Amesbury, at the eastern end of the proposed scheme, is the main location for services and community facilities in the area. The area surrounding the proposed scheme is predominantly arable land with some permanent pasture grazed by cattle and sheep and is generally sparsely populated, with small, scattered settlements.

There is an extensive PRoW network (including bridleways and footpaths) within the vicinity of the proposed scheme. These routes serve a wide range of users, including horse riders, hikers and cyclists - locals and tourists alike. The footpaths and byways situated in proximity to Stonehenge are particularly well used by visitors and tourists. The existing A303 creates severance of Winterbourne Stoke as well as some existing rights of way, whilst for drivers, regular traffic delays and the related journey uncertainty lead to driver stress.

Construction

During construction of the proposed scheme, potential impacts on agriculture relate primarily to the loss of agricultural land and soils and the possible loss, severance and fragmentation of agricultural holdings. There are also possible impacts on users of PRoW including temporary closure or diversion during construction.

Mitigation measures during construction would include temporary diversions and signage to limit the impacts of any temporary closures of rights of way and agricultural accesses. During construction the traffic management required to construct the scheme, particularly at Countess roundabout, could lead to additional delays that would increase driver stress. Discussions are ongoing with Wiltshire Council to agree traffic management measures with a view to minimising adverse effects.

Preliminary construction assessment:

- Construction of the proposed scheme would result in likely significant adverse effects on best and most versatile agricultural land and agricultural holdings.
- Construction of the proposed scheme would result in likely significant temporary adverse effects on amenity for users of the PRoW network.
- Construction of the proposed scheme would result in likely significant temporary adverse effects on driver views and stress.

Operation

During operation, the proposed scheme would include green bridges and new routes to maintain existing agricultural accesses, and maintain and improve the connectivity of the local PRow network. It would also include the provision of new rights of way, which would improve connectivity for walkers, cyclists and horse riders particularly between Yarnbury Castle and Winterbourne Stoke and between Winterbourne Stoke and Amesbury. The proposed scheme would improve traffic flows and reduce driver stress.

Preliminary operational assessment:

- Operation of the proposed scheme would result in likely significant adverse effects on driver views.
- Operation of the proposed scheme would have likely significant beneficial effects on amenity and connectivity for users of the PRow network.
- Operation of the proposed scheme would have likely significant beneficial effects on improved amenity and reduced severance for the community of Winterbourne Stoke.
- Operation of the proposed scheme would have likely significant beneficial effects of improved journey time reliability and reduced stress for drivers on the A303.



People at the World Heritage Site

Preliminary assessment of other topics

The 2017 EIA Regulations also require the assessment of additional technical topics, which are being addressed in the EIA and will be reported in full in the ES.

The assessment of impacts on **human health** is being addressed in the noise, air quality and people and communities chapters, and the combined effects will be reported in the Cumulative Effects section of the ES. No significant human health issues are anticipated.

The vulnerability of the proposed scheme to **major accidents or disasters** would be mitigated by the design of the proposed scheme and is being addressed in the individual topic chapters as appropriate. No significant adverse effects are anticipated.

Climate is being addressed by the assessment of likely impacts of greenhouse gas emissions and the resilience of the proposed scheme to cope with extreme weather events associated with climate change. No significant adverse effects are anticipated.

As part of the ongoing EIA work we are continuing to consider mitigation measures, and where appropriate, any proposed monitoring arrangements. A summary of the preliminary assessment of likely significant environmental effects, taking into consideration proposed mitigation measures, is presented in the table on pages 34-35.

Cumulative effects

An assessment is being undertaken of cumulative effects arising from the following:

- proposed developments in the vicinity of the proposed scheme that are under construction or have been consented, combined with the effects of the proposed scheme; and
- the combined effects from the proposed scheme on a single receptor from a number of individual environmental impacts, for example noise, dust and traffic.

Data is being gathered regarding other proposed developments to facilitate the assessment of likely cumulative effects. The combined effects of different environmental impacts on a single receptor are determined when the environmental assessments for the separate environmental topics have been completed, and as such this data is also not currently available. The cumulative effects assessment will be reported in the ES.

Topic	Preliminary assessment of likely significant environmental effects*	
	Construction stage	Operational Stage
Air quality	<ul style="list-style-type: none"> No likely significant effects anticipated. 	<ul style="list-style-type: none"> No likely significant effects anticipated.
Cultural heritage	<ul style="list-style-type: none"> Temporary adverse effects of construction activities on the setting of monuments within and outside the WHS. Temporary and permanent adverse effects on the setting of listed buildings in the vicinity of Countess roundabout. Permanent adverse effects due to the loss or truncation of non-designated assets, mostly outside the WHS. Permanent beneficial effects, once built, on the setting of monuments within the WHS, including Stonehenge. Permanent beneficial effects, once built, due to the removal of severance of the Avenue and of relationships between monuments in the WHS. 	<ul style="list-style-type: none"> Beneficial effect on public access to the WHS. Beneficial effect on the setting of monuments within the WHS due to the removal of traffic using the A303.
Landscape and visual	<ul style="list-style-type: none"> Temporary adverse effects of construction activities on the rural landscape, particularly the River Till valley and at Longbarrow Junction. Temporary adverse visual effects of construction activities on residents of Amesbury and Winterbourne Stoke, visitors to the WHS and users of the public rights of way (PRoW) network. Permanent adverse effects, once built, on the rural landscape, particularly the River Till valley. Permanent beneficial effects, once built, on the landscape within the WHS. 	<ul style="list-style-type: none"> Adverse visual effects on users of the PRoW network in the vicinity of the River Till valley. Beneficial effects on the townscape within Winterbourne Stoke. Beneficial visual effects on residents of Winterbourne Stoke, visitors to the WHS and users of the PRoW network within the WHS.
Biodiversity	<ul style="list-style-type: none"> Temporary adverse effects of construction activities on Stone Curlew. Beneficial effect, once built, on chalk grassland habitat in vicinity of Parsonage Down. 	<ul style="list-style-type: none"> Local adverse effects on Stone Curlew south of the A303, due to the increased public access across the WHS enabled by the proposed scheme. Beneficial effect on ecological connectivity due to the tunnel and inclusion of green bridges.

*Note - After inclusion of the proposed mitigation measures.

Noise and vibration	<ul style="list-style-type: none"> Temporary adverse noise effects of construction activities for residential properties in close proximity to the works, such as the edge of Amesbury and the northern edge of Winterbourne Stoke. 	<ul style="list-style-type: none"> Adverse noise effects for properties on the northern edge of Winterbourne Stoke closest to the section of the A303 which is realigned to the north of the village. Beneficial noise effects for residents of Winterbourne Stoke located in close proximity to the existing A303 through the centre of the village. Beneficial noise effects for visitors to the WHS.
Geology and soils	<ul style="list-style-type: none"> No likely significant effects anticipated. 	<ul style="list-style-type: none"> No likely significant effects anticipated.
Road drainage and the water environment	<ul style="list-style-type: none"> No likely significant effects anticipated. 	<ul style="list-style-type: none"> No likely significant effects anticipated.
Materials	<ul style="list-style-type: none"> No likely significant effects anticipated. 	<ul style="list-style-type: none"> No likely significant effects anticipated.
People and communities	<ul style="list-style-type: none"> Adverse effects on best and most versatile agricultural land and agricultural holdings. Temporary adverse effects on amenity for users of the PRoW network during construction. Temporary adverse effects on drivers views and stress during construction. 	<ul style="list-style-type: none"> Adverse effects on driver views. Beneficial effects on amenity and connectivity for users of the PRoW network. Beneficial effects on improved amenity and reduced severance for the community of Winterbourne Stoke. Beneficial effects of improved journey time reliability and reduced stress for drivers on A303.
Major accidents and disasters	<ul style="list-style-type: none"> No likely significant effects anticipated. 	<ul style="list-style-type: none"> No likely significant effects anticipated.
Climate	<ul style="list-style-type: none"> No likely significant effects anticipated. 	<ul style="list-style-type: none"> No likely significant effects anticipated.
Human health	<ul style="list-style-type: none"> No likely significant issues anticipated. 	<ul style="list-style-type: none"> No likely significant issues anticipated.

Consultation and next steps

This Non-Technical Summary has been prepared to help those potentially affected or interested in the proposed scheme to understand the environmental setting and currently anticipated impacts of the proposed scheme on the environment so that these considerations can be taken into account in your responses to the consultation.

Your feedback from the consultation will inform our continuing development of the scheme. Once we have taken your feedback into consideration, we plan to submit our application for a Development Consent Order in Autumn 2018. We will also prepare a report on the consultation, recording the feedback and our response, which will be published with our application.

How to find out more

To find out more about our scheme proposals you can:

Join us at one of our public information events:

members of our team will be on hand to answer your questions. To find out where and when the events are being held, visit our website or contact us by phone or email.

Visit our website at www.highways.gov.uk/A303Stonehenge/consultation:

here you will find background information on the scheme plus information on the current consultation, including:

- Details on when and where our public information events are being held
- Details of Information and Deposit Point locations at local libraries where information about the scheme can be viewed
- Our Statement of Community Consultation (SoCC)
- The Consultation Booklet and the Response Form
- Plans of the proposed scheme, including the 'red line' Site Boundary plans showing the extent of temporary and permanent land required for the construction of the scheme that will form part of our DCO application
- A Preliminary Environmental Information Report, with an accompanying Non-Technical Summary

Phone us: get in touch by calling 0300 123 5000

Email us: at A303Stonehenge@highwaysengland.co.uk

How to have your say

This is your opportunity to give your views on our proposals. There are various ways that you can respond to the consultation.

Completing the feedback form online:

www.highways.gov.uk/A303Stonehenge/consultation

Emailing us at:

A303Stonehenge@highwaysengland.co.uk

Posting your response:

Completed feedback forms can be sent by Freepost (you do not need a stamp) to the following address:
Freepost A303 STONEHENGE CONSULTATION

If you need a paper copy of the feedback form, let us know and we can post one to you.

Please submit your responses by 23:59 on Monday 23 April 2018.

Your feedback will inform our continuing development of the scheme. Once we have taken your feedback into consideration, we plan to submit our application for a Development Consent Order in autumn 2018. We will also prepare a report on the consultation, recording the feedback and our response, which will be published with our application.

Your comments will be analysed by Highways England and any of its appointed agents. Copies may be made available in due course to the Secretary of State, the Planning Inspectorate and other relevant statutory authorities so that your comments can be considered as part of the Development Consent Order (DCO) application process. We will request that your personal details are not placed on public record and will be held securely by Highways England in accordance with the Data Protection Act 1998 and will be used solely in connection with the consultation process and subsequent DCO application and, except as noted above, will not be passed to third parties.

Contact us

Visit our webpages for information about the scheme and how to have your say, or call or email us to find out more.

 A303Stonehenge@highwaysengland.co.uk

 0300 123 5000

 www.highways.gov.uk/A303Stonehenge/consultation

Next steps

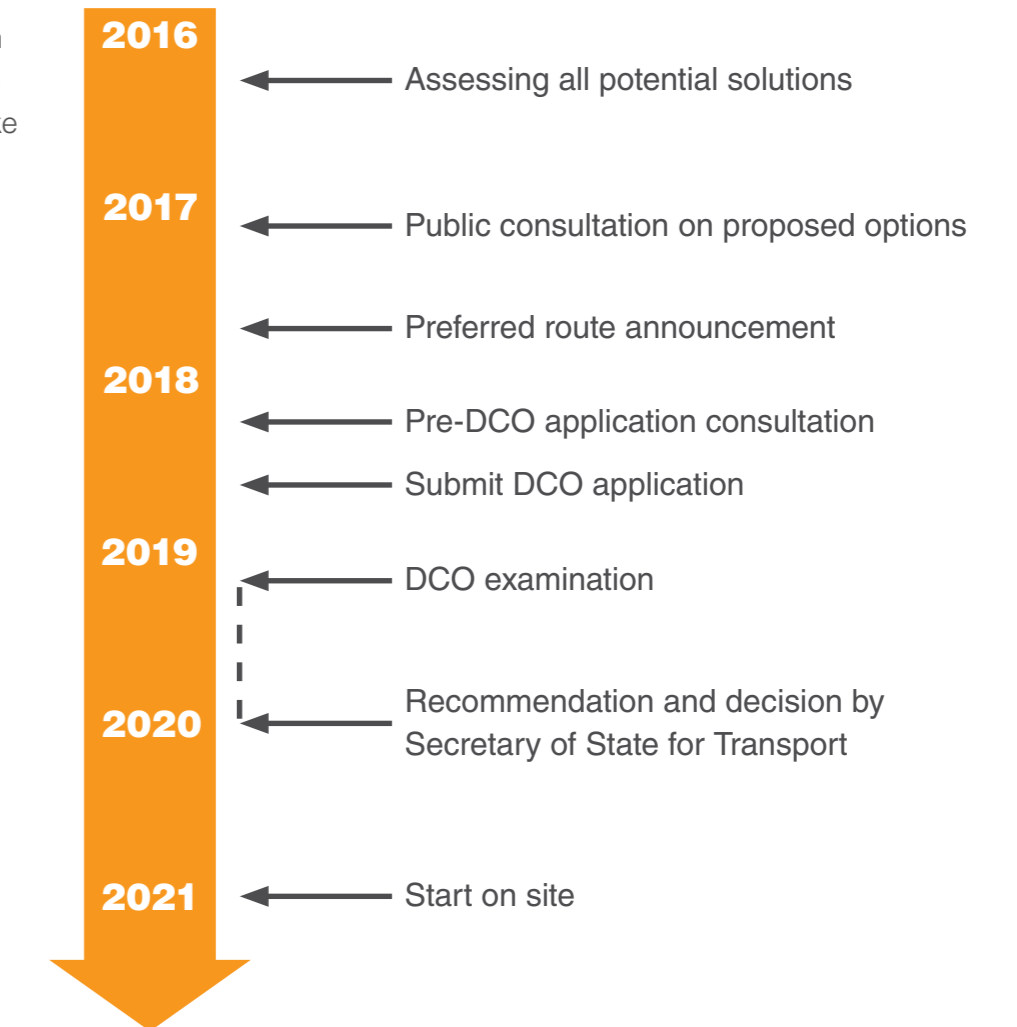
If our application for a Development Consent Order is accepted by the Planning Inspectorate, there will be an examination of the application in which the public can participate. This examination will take a maximum of six months. The Planning Inspectorate then has three months to make a recommendation to the Secretary of State, who then has a further three months to make a final decision. If our application is approved, work on the scheme is planned to start in 2021 as indicated on the illustrated Timeline.

If you would like any further information on the Development Consent Order application process, please visit the Planning Inspectorate's website:

<http://infrastructure.planningportal.gov.uk>

The Planning Inspectorate's website will also provide updates on the scheme's application process, including providing access to the submitted application documents.

Timeline



If you need help accessing this or any other Highways England information, please call **0300 123 5000** and we will help you.

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If you have any enquiries about this publication email info@highwaysengland.co.uk or call 0300 123 5000*. Please quote the Highways England publications code PR183/17

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