

# A303 Sparkford to Ilchester Dualling Scheme

# 6.4 Environmental Statement Non-Technical Summary

**July 2018** 





# **Contents**

Introduction	page 3
The Scheme	page 6
Alternatives	page 12
Likely Significant effects and mitigation	page 14
What happens next	page 29

If you would like to view the Development Consent Order application (including the Environmental Statement) please go to the Planning Inspectorate website:

https://infrastructure.planninginspectorate.gov.uk/projects/southwest/a303-sparkford-to-ilchester-dualling/?ipcsection=docs

A hard copy of the Environmental Statement is available to view at:

- Haynes International Motor Museum, Sparkford, Yeovil, BA33 7LH; and,
- Yeovil Library, King George Street, Yeovil BA20 1PY.



## Introduction

We are proposing to develop a dual carriageway on the existing single carriageway section of the A303 between Sparkford and Ilchester in Somerset. The new dual carriageway section of the road will connect to the existing dual carriageway sections of the A303 to the east and west. The scheme would also involve the removal of direct access junctions and construct new safer split-level junctions using slip roads to avoid disruption to traffic flows.

The proposed scheme is classified as a Nationally Significant Infrastructure Project and as a result requires an application for a Development Consent Order to the Secretary of State (a requirement of the Planning Act 2008) through the Planning Inspectorate. Information about the Planning Act 2008 and the Planning Inspectorate can be found on the Planning Inspectorate website:

#### http://infrastructure.planninginspectorate.gov.uk

The scheme requires an Environmental Impact Assessment in line with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as amended) and an Environmental Statement has been submitted as part of the Development Consent Order application. The full Environmental Statement comprises four volumes in total, as follows:

- The Environmental Statement main text setting out the environmental assessment in chapters (Volume 6.1).
- The Environmental Statement figures, including drawings, photos and other illustrative material (Volume 6.2).
- The Environmental Statement technical appendices (Volume 6.3).
- The Environmental Statement non-technical summary (Volume 6.4).

This document forms the non-technical summary (Volume 6.4) of the Environmental Statement and presents a summary of the key findings to understand and report the effects of the proposals on the environment. It is intended to be easy to read and, free from jargon.

The full Environmental Statement and supporting documents can be viewed online at <a href="https://infrastructure.planninginspectorate.gov.uk/projects/south-west/a303-sparkford-to-ilchester-dualling/?ipcsection=docs">https://infrastructure.planninginspectorate.gov.uk/projects/south-west/a303-sparkford-to-ilchester-dualling/?ipcsection=docs</a>. Printed hard copies will be available to view at:

- Haynes International Motor Museum, Sparkford, Yeovil, BA33 7LH.
- Yeovil Library, King George Street, Yeovil BA20 1PY.

#### Environmental impact assessment and consultation

An Environmental Impact Assessment (EIA) is an assessment of the consequences of a major project which will affect the natural, built and social environment. The EIA Directive, which has been transposed into UK law through the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017, forms the basis of the legal requirements for an EIA.

The following environmental factors have been assessed as part of the EIA:

- Population and human health
- Biodiversity
- Land, water, soil and climate
- Material assets, cultural heritage, and the landscape



Please see overleaf the Environmental features and constraints plan which details locations of environmental features and constraints included in the EIA for the scheme.

The Environmental Statement is a key part of the application documents submitted by us in support of the Development Consent Order application. Its principal purpose is to assess the likely significant effects of the scheme on the environment, to enable an informed decision to be made on whether or not to grant the Development Consent Order.

The objectives of the EIA are to provide information and advice, and reports to describe the likely significant effects of the development on the environment resulting from:

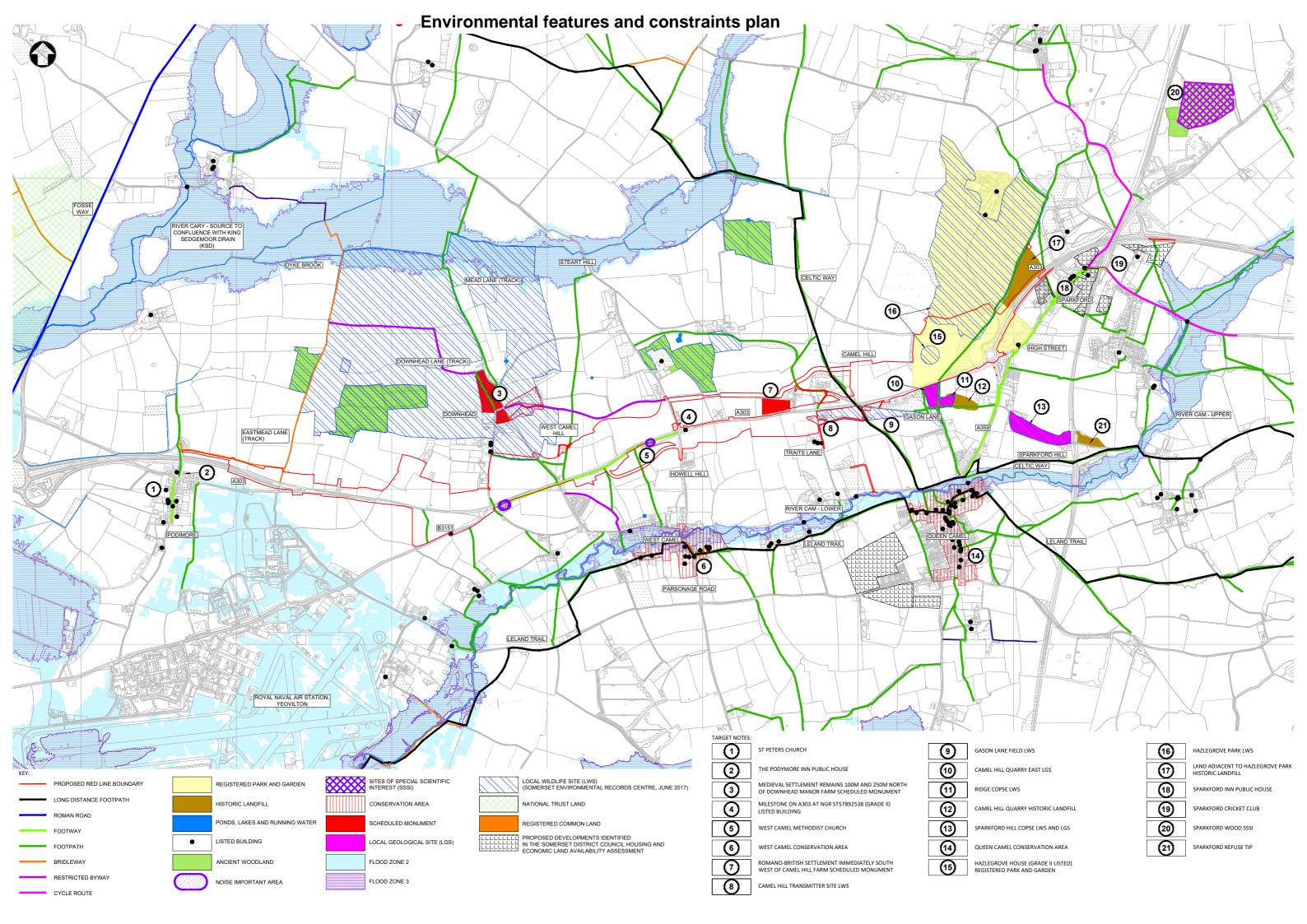
- the construction and existence of the development, including, where relevant, demolition works
- the use of natural resources, land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources
- the emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste
- the risks to human health, cultural heritage or the environment (including major accidents and disasters)
- the cumulation of effects with other existing and / or approved projects, taking
  into account any existing environmental problems relating to areas of particular
  environmental importance likely to be affected or the use of natural resources
- the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change
- the technologies and the substances used.

The EIA considers both direct and indirect effects of the scheme. Direct effects are those caused by the scheme itself such as the removal of trees or shrubs to build the road. Indirect effects on the environment are not a direct result from the scheme but include effects such as from increased noise from cars on local roads due to diversions during construction. Best practice taken from guidance from the Design Manual for Roads and Bridges (DMRB), which covers environmental assessments for road schemes within Volume 11 Environmental Assessment, has been used to guide the EIA for the scheme. The output of the EIA is to report the likely significance of effects using established significance criteria, as presented within the DMRB Volume 11, Section 2, Part 5.

The significance criteria for environmental effects are defined in terms of the amount of change from the existing environment (the baseline, which is how things look today, before construction works start), on a 5-point scale of 'very large', 'large', 'moderate', 'slight' or 'neutral'. The environmental effects can be adverse or beneficial, for example Slight Adverse or Moderate Beneficial.

Using the 5 significance categories for all environmental effects that are identified within the Environmental Statement allows different topic issues to be placed upon the same scale, to assist the decision-making process. Effects are considered significant if they are moderate adverse or beneficial or above. Within this document, the significance of effects is subsequently described as Significant or Not Significant.

There are several beneficial impacts of the scheme which have been recorded. Where there are significant adverse effects, measures to avoid, reduce and where possible, remedy these effects have been included within the assessment.



## The Scheme

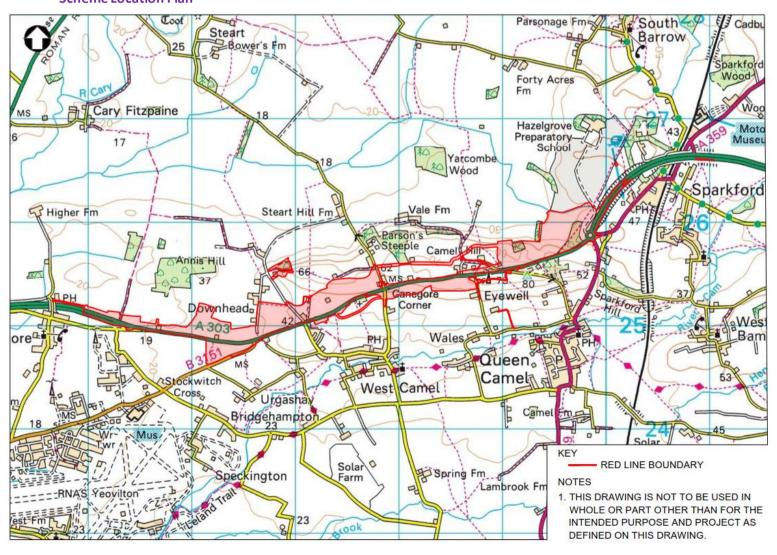
#### Scheme location

The scheme would provide a dual-carriageway on the A303 between Sparkford and Ilchester in the county of Somerset and in the district of South Somerset, in south west England. This would connect the existing dual-carriageway sections to the east and west, between Hazlegrove Roundabout and Podimore Roundabout as shown in the scheme location plan below.

The route of the scheme is as follows:

- Travelling eastwards from Podimore Roundabout, the route would move north of the existing A303, allowing it to be retained for use as a parallel local road.
- The road would then rise up West Camel Hill before crossing over the existing A303 at the junction with Steart Hill / Howell Hill.
- The route would then take a southerly alignment briefly, before meeting up with the
  existing road again to pass between the Scheduled Monument at Vale Farm and the
  Ministry of Defence signal station at Eyewell / Traits Lane.
- Finally, the route would then bypass the existing Hazlegrove Roundabout to the north through the Registered Park and Garden associated with Hazlegrove House, before tying into the existing A303 north of Sparkford village.

#### Scheme Location Plan





#### Need for the scheme

The single carriageway section of the A303 between Sparkford and Ilchester suffers from congestion and queuing, particularly during the summer months and at weekends. It also suffers from higher than national average accident rates for single-carriageway A-class trunk roads. Five split level junctions and accesses, 5 non-motorised user (NMU) crossing points and limited space for road workers during maintenance create hazards for user groups (both motorised users and NMUs).

Dualling of the A303 between Sparkford and Ilchester would overcome the existing traffic problems on this section of the road, improving safety, increasing capacity and supporting economic growth through improved connectivity and journey resilience.

### Description of the scheme

The scheme would follow part of the existing A303 very closely and has been deliberately aligned just to the side of the existing carriageway along most of the route, to allow re-use of the existing carriageway for local access, to avoid property or facilitate construction. The greatest distance that the scheme is located from the existing A303 is typically 100 metres either north or south of the existing A303.

Key elements of the scheme are shown in the General Arrangement Plan below, which presents the overall layout of the scheme. The scheme includes:

The provision of a new dual carriageway

The scheme will be approximately 3.5 miles or 5.6 kilometres in length.

A new junction at Camel Cross (Camel Cross Junction)

This would be a 'left in-left out' junction and provide access to and from the new A303 westbound carriageway only. The junction would provide continued connection between the A303 westbound carriageway and the B3151, Royal Naval Air Station (RNAS) Yeovilton and the Fleet Air Arm Museum.

#### A new junction at Downhead (Downhead Junction)

This would be a 'left in-left out' junction and provide access to and from the new A303 eastbound carriageway only. This junction would provide continued access to the settlement of Downhead and to Babcary via Steart Hill. It would also provide a connection, via the Steart Hill overbridge, to the B3151, RNAS Yeovilton and the Fleet Air Arm Museum and West Camel.

#### A new junction at Hazlegrove (Hazlegrove Junction)

This would provide an all-movements connection between the proposed A303 dual carriageway and the local road network through the provision of 4 slip roads. This junction would be positioned to provide continued access to local roads associated with the existing Hazlegrove Roundabout.

#### Changes to the local road network

Several existing junctions between local roads and the A303 will be closed to improve road safety. These roads are the A303 Westbound off-slip at Podimore an un-named road at Camel Cross, Traits Lane and Gason Lane. Impacts of these closures will be minimised by



the creation of new local roads that will enable local travel to continue broadly as it currently does.

#### These are as follows:

- New local road connecting Downhead Junction to West Camel
- New local road connecting Downhead Junction with Steart Hill
- New local road connecting Steart Hill retained A303 near Steart Hill Roundabout to Howell Hill
- New local road connecting Steart Hill to retained A303 for Blue Haze and the quarry
- New local road connecting Camel Hill Roundabout to Camel Hill Farm and Vale Farm
- New local road connecting Camel Hill Roundabout to Hazlegrove Roundabout
- New local road connecting Hazlegrove Roundabout to retained A303 for Camel Hill services

#### Changes to the local rights of way network

The new A303 dual carriageway would sever 10 existing rights of way, these include Bridleway Y30/28 and Footpaths Y27/21, WN23/32, WN23/10, WN23/33, Y27/UN, Y27/10, Y27/29, Y27/9 and WN23/12 (as depicted on the Somerset County Council's Rights of Way map, which is available at <a href="https://roam.somerset.gov.uk/roam/map#">https://roam.somerset.gov.uk/roam/map#</a>). A west to east non-motorised user link will be provided. This west-east route would intercept each of the severed routes and enable users to travel to the nearest bridge crossing of the new A303.

#### Two new bridges

Two proposed road bridges will be provided to facilitate safe crossing of the proposed A303 dual carriageway by vehicles and non-motorised users. The new bridges will be Steart Hill overbridge and Hazlegrove underbridge.

#### The provision of road lighting

The Hazlegrove Roundabout will continue to be lit as it currently is. Day-time lighting will be provided in the Hazlegrove Junction Underbridge for safety reasons.

The provision of drainage systems to drain the proposed carriageways and adjacent land Water runoff from the proposed A303 will be collected in channels alongside each carriageway. These channels will be constructed from concrete or grass depending on their location. Runoff from the new proposed local road carriageways will be collected in gullies at the carriageway edge. The A303 and local road drainage systems will pass through attenuation ponds, which will reduce the flow of water before it reaches the watercourses. Five proposed attenuation ponds will be provided, along with the modification of an existing drainage pond.

#### Updated traffic signs and road markings

New road signs will be provided to reflect the new A303 layouts. However, the overall signing strategy and the destinations that are signed at any given location will not change substantially from the existing road signs. Road markings will be provided on all new carriageways.



#### Safety barriers

Safety barriers or 'vehicle restraint systems' as they are otherwise known, will be provided alongside carriageways where they are deemed necessary for road safety. In particular, a concrete safety barrier will be provided in the central reserve along the full length of the scheme.

#### **Earthworks**

Earthworks would be required as part of the scheme in order to establish the road foundation (including where the road is cut into the landscape and where the road would be on a raised bank (an embankment) to carry the road over a lower lying area) and also to provide visual screening and noise reduction.

Noise reduction fencing will be provided to supplement the earthworks screening where space is limited.

#### Boundary treatments alongside the proposed roads

The edge of the area of land to be owned and managed by Highways England once the scheme has been built is called the highways boundary. To mark this edge, "boundary treatments" will be put in place. These will include boundary fencing, hedgerow planting, tracks to provide access to adjacent land, and perimeter drainage ditches.

For further details and a detailed description of all elements of the scheme, refer to Chapter 2, The Scheme, of the full Environmental Statement Volume 6.1.

#### Environmental design

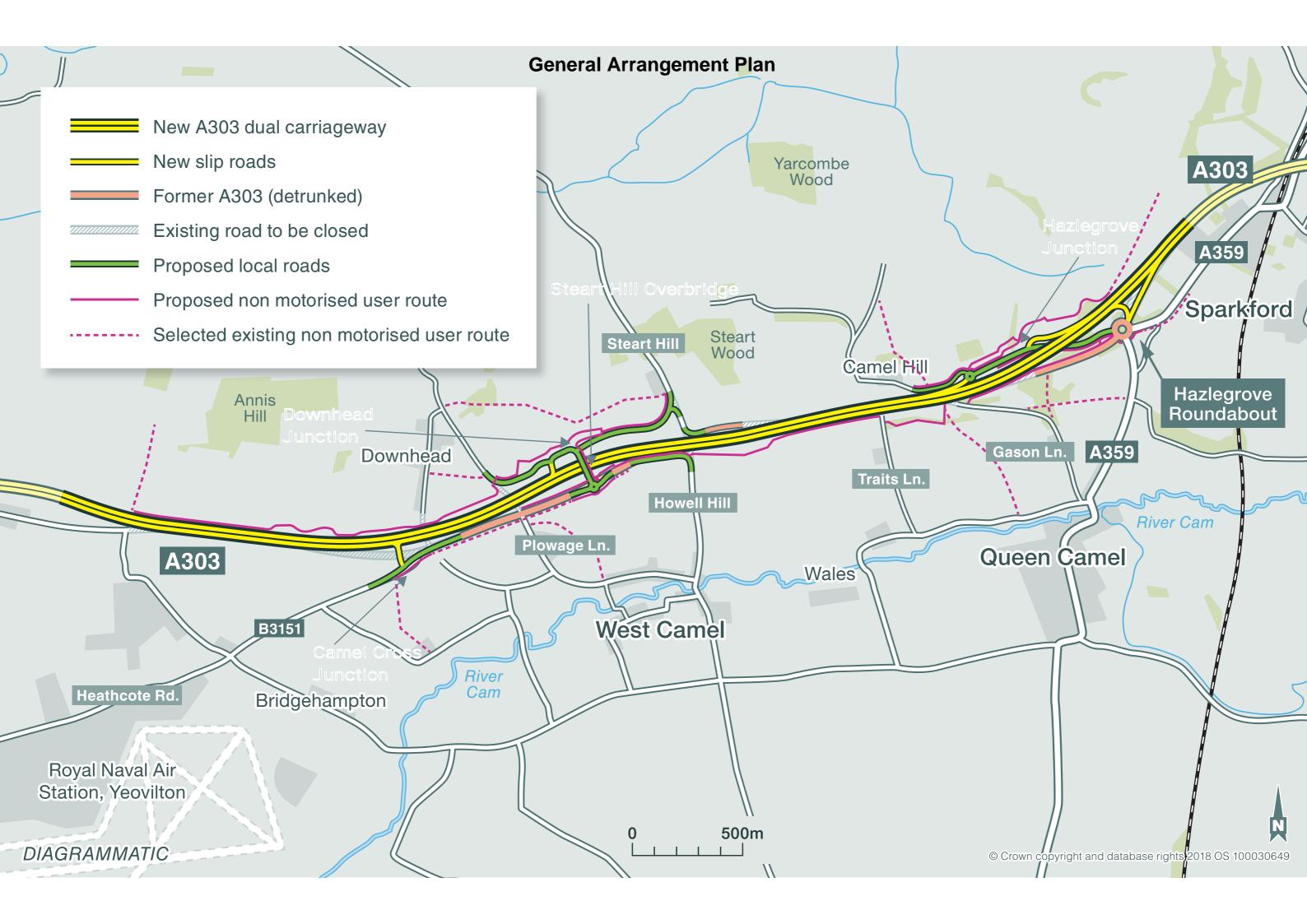
The environmental design for the scheme has been produced to ensure that the new road would fit in with the existing and retained landscape pattern, and to reduce adverse effects from the construction of the new A303. The environmental design ensures that field and hedgerow networks would be replaced or reformed to provide habitat networks for wildlife, along with native woodland planting which would be provided along the new A303. This would fill in gaps in the existing vegetation, provide wildlife connections and would also screen the road from sensitive viewpoints. The Environmental Masterplan can be found in Figure 2.5 of Volume 6.2 of the full Environmental Statement.

#### Construction

The construction phase is due to begin in Spring 2020 and is expected to take 2.5 years to complete.

Construction work would take place between 07.00 and 18.00 on weekdays and from 07.30 to 13.00 on Saturdays, with no working on Sundays and Public Holidays. There may be exceptions to these hours to accommodate elements such as oversize deliveries and tie-in works where bridges and junctions would be connected to the new A303, which are likely to involve full weekend closures (approximately 2 full weekend closures for each of the 2 tie-in areas) throughout the duration of the construction works. An Outline Traffic Management Plan has been produced for the scheme. This would be developed into a full Traffic Management Plan (TMP), which would be implemented during the construction phase of the scheme to ensure there is a safe environment for those travelling along the route, and for those delivering the construction works.

Full details of how the scheme would be built are contained within Chapter 2 The Scheme of Volume 6.1 of the full Environmental Statement.



#### Future baseline

The potential changes to the existing environmental baseline (which is how things look today before construction works commence) due to natural changes have been considered in the EIA over both a 15 and 60-year period. This is termed the future baseline and assumes that the dualling scheme is not constructed, and instead, the existing A303 is maintained in its current state.

Future changes to the baseline without the scheme, could result from both natural events and from other human activities. This could include development (homes and businesses), changes to greenhouse gas emissions (such as from changes in traffic flows) and climate change (resulting in increased flood risk and severe weather). These changes could impact on population and human health, material assets, cultural heritage and the landscape, land, soil, water, air and climate and biodiversity. In the next 15 years, no substantial baseline changes are anticipated for air quality, biodiversity, noise and vibration and climate topics. For other environmental factors, fluctuations to the environmental baseline are anticipated within the 15-year period. These changes include alterations to localised and long-distance views that may occur due to new houses being built, as well as the potential for pollution events for soils and water due to new developments including housing, increased flood risk as a result of new developments and the depletion of primary materials from these residential and also commercial building. A positive impact from increased opportunities of employment due to development may also occur.

Within a 60-year period, both positive and negative changes to the environmental baseline are anticipated on all topics. Positive changes include improvements to air quality as a result of the increase in the number of electric cars, and improvements to water quality and aquatic ecology due to implementation of waterbody mitigation such as removal of silts and river clean-up measures, in line with national River Basin Management Plans, which set out how organisations, stakeholders and communities will work together to improve the water environment. However, negative changes are likely to include a range of impacts from new development within the study area, including impacts and interruptions to views, impact on the wider landscape from the introduction of new buildings, increase risk of flooding and negative impacts on biodiversity due to a reduction in habitats for wildlife to make space for new buildings. In addition, the increased levels of greenhouse gas emissions due to increased development and vehicle movements will have an impact on climate, which may result in increased frequency of extreme weather events.

A description of these changes is provided within Chapter 2 The Scheme contained in Volume 6.1 of the full Environmental Statement.







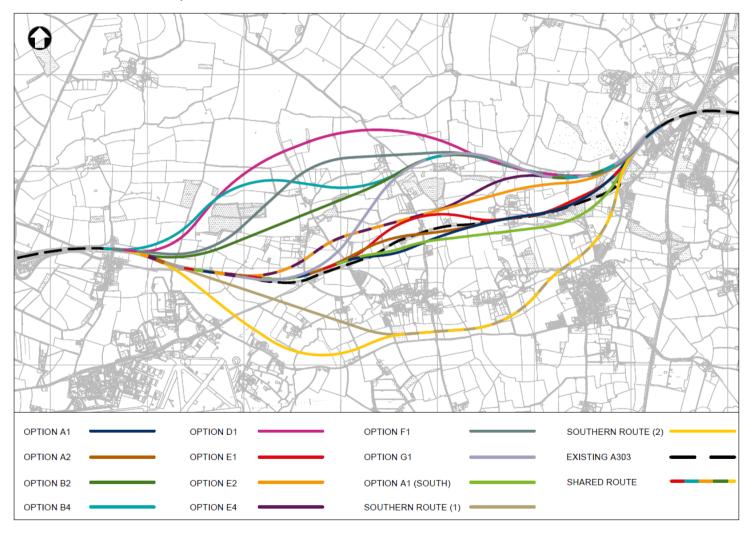
# **Alternatives**

#### Consideration of alternatives

We have worked closely with local authorities, environmental bodies and other stakeholders such as landowners, business owners, tenants and people with other land interests located within or around the scheme area, to better understand local concerns and consider how to reduce environmental effects through carefully considered design.

Thirteen potential route options were originally identified with a broad range of possibilities considered, including online solutions and central, northern and southern offline solutions, as shown in the route options drawing below. These 13 options were put through an option sifting process to compare and evaluate them against a number of criteria including economics, environment, management, financial and commercial criteria.

The 13 route options





On completion of the sifting process 4 short-listed options were then taken forward for further assessment. The 4 shortlisted options were A2, B4, E4 and F1.

The 4 shortlisted options were subject to a further technical appraisal including an environmental appraisal, which concluded that 1 central and 1 northern route option should be taken forward to the first (non-statutory) public consultation which was held in February and March 2017. These 2 options were then subject to further environmental, economic, and technical assessment in 2017. The results of these assessments, along with the outcomes of the consultation, helped to identify the preferred route which was announced in October 2017.

The principal reasons for the decision to proceed with Option 1 over Option 2, were as follows:

- Option 1 minimises land-take.
- Option 1 is the shortest of the 2 options, reducing journey time and carbon emissions.
- The route of Option 1 follows existing corridor very closely, minimising construction in an unspoilt rural setting.
- Option 1 has less of an impact on Hazlegrove Registered Park and Garden.
- Option 1 has slightly less impact on biodiversity.
- 64% of those who responded to the consultation favoured Option 1 (compared to 29% who favoured Option 2).

A 6-week statutory public consultation which presented the preferred route, was held between 26 January to the 9 March 2018 to gather feedback from interested parties and statutory stakeholders. Some 400 people attended the local consultation events and a total of 241 people responded to the consultation by completing a questionnaire or submitting written feedback.

The scheme design has evolved as a result of the consultation feedback—received, as well as the ongoing consultation with statutory consultees (including Statutory Environmental Bodies). This is to ensure that a 'good design' is developed to meet the requirements of the National Policy Statement for National Networks. The main changes made to the design include the following:

- Change to the Hazlegrove Preparatory School access road, which will reduce adverse effects to the Hazlegrove Registered Park and Garden.
- The access road to Ridge Copse and Camel Hill Services now connects to the local road network. This has reduced the need for lighting and has reduced habitat loss in this area.
- The angle of the Steart Hill Overbridge has been reduced, moving vehicles further away from properties and sites sensitive to noise and air quality effects.
- The priorities between local roads at the junction to the north of Steart Hill overbridge have changed, moving vehicles further from the residential property in this area, reducing adverse effects on air quality, noise, landscape, heritage and people and communities.

Further details are provided within Chapter 3 Assessment of Alternatives contained in Volume 6.1 of the full Environmental Statement.



# Likely significant effects and mitigation

# Air quality

The scheme has the potential to cause changes to both local air quality and regional air quality during construction and once the scheme is open to traffic.

#### Method of assessment

Construction dust has been assessed based on a review of likely dust raising activities and identification of sensitive human health receptors (residential properties) within 200 metres of these construction activities. No ecological designated sites have been assessed as there are no designated sites within 200 metres of construction activities.

Operational air quality emissions have been assessed by modelling the change in concentrations of likely air pollutants at sensitive residential properties, schools and designated ecological sites (Whitesheet Hill Site of Special Scientific Interest (SSSI)). Traffic data was used to model the change in concentrations because of the new carriageway alignment and the change in traffic characteristics associated with the proposed scheme.

#### Construction

During construction, the scheme could affect local air quality because of construction traffic management measures and from construction dust arising from construction activities. Well established industry best practice controls would be employed which would reduce the impact of fumes and dust on residents and the local area and prevent nuisance for them. Such controls would include minimising the height of stockpiles to reduce windblown dust emissions and the risk of pile collapse creating more dust, as well as locating stockpiles out of the wind (or

cover, seed or fence) to minimise the potential for dust generation. Maintaining a low speed limit on site to prevent the generation of dust by fast moving vehicles, damping down surfaces in dry conditions and switching off all vehicle engines and plant motors when not in use will also help to reduce dust and fumes. These controls would be implemented through the Construction Environmental Management Plan. With this mitigation in place no significant effects would be anticipated.

#### **Operation**

During operation, traffic related pollutants have been predicted at sensitive properties, schools and designated sites (Whitesheet Hill SSSI) which represent the locations most likely to be affected from changes to air quality once the scheme is open to traffic.

For sensitive residential properties, schools and designated ecological sites the predicted change in traffic related pollutants would not be significant.

The scheme would cause an increase in the number of vehicles travelling along the A303 between Exeter and London, and therefore is predicted to cause small changes in regional emissions once open. Compared to national emissions, the increase would not be significant. No mitigation is required during operation as no significant air quality impacts are anticipated.

Further details are provided within Chapter 5, Air Quality, of Volume 6.1 of the full Environmental Statement.



# Cultural heritage

A diverse range of heritage features have been identified in the study area, including 2 Scheduled Monuments within 1km of the scheme, archaeological remains, several listed buildings, historic buildings and Hazlegrove Registered Park and Garden.

#### Method of assessment

The cultural heritage assessment draws upon information gained from desk-based sources, a search of archaeological records from the Somerset Historic Environment Record database, site inspections, and archaeological field surveys.

#### Construction

The scheme is in an area of high historic and cultural value due to the diverse range of heritage features in the area. As a result, the setting of several historic buildings, including listed buildings, would suffer from noise and visual intrusion during construction.

The Construction Environmental Management Plan would include measures to ensure that key features are protected during works. Measures are likely to include temporary fencing and exclusion areas. In addition, a Written Scheme of Investigation (WSI) would be produced to ensure the preservation of archaeological remains. For example, a grade II listed milestone of Ham stone within the scheme footprint would be removed to enable construction. The current location of the milestone would be recorded, photographed and relocated to an alternative point on the A303 once construction works are complete. Around Hazlegrove House Registered Park and Garden where likely significant effects have been reported, mitigation includes screening designed to reflect the character of the park, with false cuttings (manmade

screening in the form of earth mounds), woodland planting and reinstatement of parkland grazed grass land and specimen tree planting in an area which is currently arable farmland, and detracts from the character of the park and garden. However, the scheme would still result in a permanent loss of approximately 14% of the Registered Park and Garden.

Therefore, after mitigation there would be residual significant adverse effects for the grade II listed Evewell House and outbuildings, grade II Hazlegrove House Group and Hazlegrove Registered Park and Garden, grade II listed Milestone of Ham stone with a cast iron plaque and Camel Hill Scheduled Monument.

Milestone on A303





#### **Operation**

During operation an increase in traffic noise and an increase in lighting columns both have the potential to have negative impacts on the setting of heritage assets.

Mitigation has been included into the scheme design to avoid significant operational impacts. This includes screening the route of the A303 from historic views from the northern parkland and Hazlegrove House with earth mounds and planting. In addition, new junctions and moving traffic would be screened by landscape planting and earth mounds. However, during operation there is the potential for significant effects on Hazlegrove House Group and Hazlegrove House Registered Park and Garden Group due to traffic noise and the installation of lighting columns. In addition, there is the potential for permanent significant adverse effects on unknown buried archaeological remains if discovered once construction starts.

Further details are provided within Chapter 6, Cultural Heritage, of Volume 6.1 of the full Environmental Statement.

#### Hazlegrove House

# Landscape

The surrounding landscape is principally rural and land use is predominantly farming. Residential areas are concentrated to the south of the A303. including the historic villages of Sparkford, Queen Camel and West Camel. To the north of the A303, residential properties are mostly farm houses. Hazlegrove House Registered Park and Garden and Hazlegrove School adds to the make-up of the north-eastern section of the area likely to be affected by changes to the landscape as a result of the scheme Queen Camel and West Camel are designated as Conservation Areas. The Landscape Character Areas of West Camel Hill, Hazlegrove, Sparkford, Weston Bampfyde, Queen Camel, West Camel and Wales and Yeovilton are within the scheme study area.

#### Method of assessment

A Landscape and Visualisation Impact Assessment has been conducted for construction and operation, considering effects to the Landscape Character Areas noted above, visual receptors (views from houses and public rights of ways), elevated viewpoints and the surrounding landscape within 1km of the scheme.





#### Construction

During construction, vehicles, material stockpiling, heavy plant and machinery would change the view from residential buildings, public rights of way (PRoW), and road users and impact the Landscape Character Areas.

To mitigate this, we will carefully consider the way that temporary construction buildings are blended into the local environment, doing what we can to keep lighting to a minimum and using motion detector lighting to make sure lights are not on when they are not needed. Material stores would be kept to a minimum height and material would be delivered to site as required. These measures would all be detailed within the Construction Environmental Management Plan.

After this mitigation there would be a significant but temporary impact upon the Landscape Character Areas of West Camel Hill, Hazlegrove, West Camel and Wales. Sixteen visual receptors (including views from public rights of way, elevated viewpoints, residential, heritage and commercial receptors), would also experience significant effects during construction due to changes in views and presence of construction material.

#### Operation

Planting of new trees, hedgerows and shrubs would connect the road with the rural landscape, creating beneficial effects.

This is a result of implementation of native tree and shrub planting along the A303, restoration of hedgerow boundaries, construction of screening bunds (earth mounds), reducing the visibility of traffic and infrastructure on the road and of reduction in traffic on the retained section of the existing A303, where existing traffic is present in the baseline view.

In Year 1 only Landscape Character Area 2 Hazlegrove would experience significant effects during operation, this is due to the sense of space being adversely effected by construction. All other Landscape Character Areas would experience nonsignificant effects with the majority experiencing no effects. Over time (15 years) the likely significant effects experienced in Landscape Character Area 2 (Hazlegrove) would be reduced to nonsignificant effects. Once the scheme is open to traffic, 7 visual receptors (views and houses) would experience significant adverse effects due to a reduction of vegetation opening up views of traffic 1 year after opening. Over time (15 years) there would be no visual receptors experiencing significant effects once new planting has grown. 12 visual receptors would experience beneficial effects 15 years after opening due to the planting described earlier.

Further details are provided within Chapter 7, Landscape, of Volume 6.1 of the full Environmental Statement.





# **Biodiversity**

The natural environment around the scheme comprises of a variety grasslands, hedgerows and woodland. Extensive field surveys of these habitats found wildlife including badgers, bats, numerous bird species including barn owls, reptiles, otter, water voles and Great Crested Newt, all of which are protected by UK and EU laws.

#### Method of assessment

Valued ecological receptors (including designated sites and protected species) were identified within 1km of the scheme and assessed for construction and operation impacts. Surveys have taken place over several seasons. These have enabled an understanding of the populations within the area in which the scheme could potentially impact on ecological features. Desk based studies into designated sites and protected areas have also been carried out.

#### Great Crested Newt



#### **Construction**

Best practice measures would be applied during construction to minimise the air pollutants during works, as described above under Air Quality and Construction. To mitigate habitat loss, replacement planting and habitat enhancement measures would be provided to ensure that the land taken is replaced with land of better quality for wildlife. Reptiles and Great Crested Newts would be moved in accordance with best practice. Water voles would be dispersed from works areas by phased vegetation clearance. Vegetation clearance and earthworks would be supervised by a suitably experienced ecologist. In accordance with the Construction Environmental Management Plan, lighting and noise disturbance would be minimised.

To facilitate the proposed works, a small amount of habitat within Hazlegrove Park local wildlife site (LWS), would be temporarily affected during construction due to a small area of habitat loss and removal of 1 veteran tree. In addition, it is anticipated that there would be an adverse effect during construction on Gason Lane Field LWS due to small amount of land being converted into part of a public right of way. Both effects on LWS would not be significant.

The scheme would require some land take from semi natural habitats including hedgerows and would cause damage to bordering working areas because of site compounds, material storage, access and temporary construction traffic routes. This would have a short term significant adverse effect.

The priority habitats of broadleaved seminatural woodland, broadleaved plantation woodland, parkland and chalk grassland would also suffer some land loss, however this would not be significant.



Bats, badgers and Barn Owls would be subject to fragmentation of foraging and commuting routes, due to vegetation clearance and lighting and noise disturbance, this would be significant for bats and barn owls in the short term, but not for badgers or breeding birds.

Great Crested Newts and reptiles would suffer from loss of terrestrial habitat due to vegetation clearance, this would also not be significant.

No other species would be subject to any adverse effects during construction.

Grass Snake



#### **Operation**

The scheme design has sought to avoid and minimise habitat loss in the long term wherever possible. This has included designing structural features around key habitats to avoid loss; for example, by positioning the drainage ponds to maximise preservation of mature trees and hedgerows. A badger tunnel would be installed at a location where badgers have been identified crossing the A303.

Nesting bird boxes, bat boxes and 1 bat house would be installed.

Much of the mitigation for the operational phase is included in the environmental design for the scheme. More detail can be found in the Environmental Masterplan, which can be found in Figure 2.5 of

Volume 6.2 of the full Environmental Statement. This includes new planting for wildlife to provide new and improved habitat. The habitat strategy is based on the principles of more gain than loss in habitats of biodiversity value, which are of benefit to a wide range of protected species.

During operation there is the potential for pollution incidents and changes in airborne pollutants at Hazlegrove Park LWS, Camel Hill Transmitter LWS, Ridge Copse LWS and Downhead Manor Farm LWS, however, this would not be significant. Habitats are not likely to be significantly affected during operation due to the provision of replacement land and mitigation in the scheme design. Bats and Barn Owls would potentially suffer noise disturbance and the road would act as a barrier to movements, but these impacts are not anticipated to be significant with the mitigation in place. No other species would be subject to any adverse effects during operation.

Further details are provided within Chapter 8, Biodiversity, of Volume 6.1 of the full Environmental Statement.

Bloody Nosed Beetle





# Geology and soils

There are 2 designated local geological sites within 250 metres of the scheme boundary. There are no sensitive groundwater areas within the scheme boundary. The scheme would however cross or pass close to sites which may be contaminated with hazardous substances such as fuels, chemicals and waste by historical activities and / or be sources of waste.

#### Method of assessment

The methodology included assessing the sensitivity of the geology and soils (including underground water and contaminated land) located in the vicinity of the scheme that have the potential to be affected by the construction of it.

#### **Construction**

To avoid any adverse impacts upon geology, soils and contaminated land during construction, all works would be carried out in accordance with the Construction Environmental Management Plan.

A full Soils Management Plan and Materials Management Plan would also be prepared outlining mitigation measures including the storage, handling and disposal of contaminated soils.

Such measures would include the protection of the soil structure and quality using best practice procedures, minimisation of waste generation, dust suppression, protection of controlled waters, prevention of contamination through use of suitable personal protective equipment and industry best practice guidelines.

In addition, following the receipt of full ground investigation results, a Contaminated Land Risk Assessment will be produced which will enable the selection of any additional mitigation measures required, to ensure the protection of human health (people and communities) and environmental receptors (designated sites and protected species) during construction.







Any mitigation measures required will then be incorporated into the Construction Environmental Management Plan prior to construction.

Construction activities with the potential to result in adverse effects on geology and soils include excavation works, earthworks and general construction works. Without mitigation these activities may lead to the permanent removal or worsening of agricultural soils, potential risks to human health and the potential for the contamination of soils, groundwater and surface water because of accidental spills and leaks relating to construction plant and fuels / oils. However, with the mitigation detailed above, effects on geology and soils during construction would not be significant.

#### **Operation**

No impacts are identified for geology and soils for the operation scheme since all the effects would occur whilst it is being built. Therefore, once operational, the scheme is not expected to result in any significant adverse effects on geology or soils. Further details are provided within Chapter 9, Geology and Soils, of Volume 6.1 of the full Environmental Statement.

# Material assets and waste

The construction of the scheme would require large amounts of materials and would generate waste that would need to be recycled or disposed of. The treatment and / or disposal of these materials would typically cause environmental impacts, such as contributing to landfill waste, damage to local hydrological systems and emissions associated with the transport required for disposal.

#### Method of assessment

The material assets and waste assessment involves reviewing and

assessing the material resource usage and generation of waste associated with construction of the scheme.

#### Construction

Mitigation measures to reduce the impacts associated with the construction of the proposed scheme include ensuring that recycling and disposal sites have appropriate waste disposal permits and the re-use of materials excavated on site into construction. In addition, opportunities for reduction, reuse and recycling have been considered where possible, such as the consideration of local materials suppliers and using materials with a high recycled content. A Site Waste Management Plan and a Materials Management Plan would be produced to detail how waste would be reduced, reused and disposed of on site.

During construction, site remediation (removal of pollutants), earthworks preparation and the demolition of existing structures has the potential for impacts associated with the transportation of materials and the unnecessary introduction of primary aggregates (new materials) and exportation of excess waste materials. In addition, the construction would require a large amount of materials, however with the mitigation described above, effects on materials and waste during construction are not anticipated to be significant.

#### **Operation**

Although operation would give rise to some material resource usage and generation of waste, this would be minimal, and any effects would not be significant.

Further details are provided within Chapter 10, Material Assets and Waste, of Volume 6.1 of the full Environmental Statement.



# Noise and vibration

Construction and operation of the scheme has the potential to give rise to both temporary and permanent noise and vibration at the sensitive receptors (residential and commercial properties) in the area.

#### Method of assessment

A noise and vibration assessment has been undertaken to establish significant temporary and permanent effects (noise and vibration increases) associated with the construction. The study area is 300 metres of the scheme boundary for construction and within 1kilometre for operation. Part of the assessment process is to identify measures to reduce and eliminate significant adverse effects. Prior to the assessment, noise monitoring was undertaken across the area.

#### Construction

To mitigate and minimise adverse effects, the limits for normal working hours and levels of noise at nearby properties would be agreed in advance of the works in consultation with South Somerset District Council's Environmental Health Officers. Everything possible will be done to reduce noise and vibration during construction. Measures incorporated into the design and environmental management requirements of the scheme include screening of noisy machinery, and appropriate location of noisy plant items, and site maintenance, as well as monitoring of noise levels during construction.

Construction activities which would generate noise and vibration include:

 Enabling works including tree / hedgerow clearance

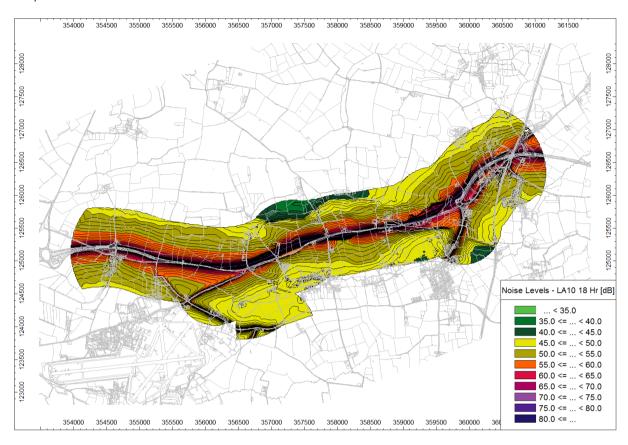
- Moving of earth to include stripping of soils, building bunds and creating cuttings
- Drainage works
- Roadworks, including road pavement construction
- Construction of new structures, including Downhead Junction overbridge, Steart Hill Overbridge, Traits Lane underbridge, Hazlegrove Junction underbridge
- Construction of works compound and compound operation)

Road works would have the potential to adversely affect a small number of properties (some residential properties, a bed and breakfast, a church and 2 commercial properties within 50 metres) in the area. The assessment identified that with the construction works taking place within the suggested work duration limit hours the effects would not be significant. Other construction activities including overbridge and underbridge construction, temporary construction traffic routes, and site compound works, were assessed and we concluded that existing noise levels would not increase significantly during the construction works. There would be no significant adverse effects due to vibration, providing piling takes place for no more than 10 days of working in 15 consecutive days or 40 days of working in 6 months.

#### **Operation**

Four noise barriers and 7 noise screening bunds (earth mounds) would be provided along the scheme to mitigate operational noise. New road surfacing would be a thin (low noise) surface, and acoustic barriers and bunds would be provided in sensitive locations. The noise barriers will be located along the alignment of the A303, 1 located at a property known as The Spinney, 1 located at Steart Hill and 2 located near Camel Hill.





Two bunds would be located towards the western end of the scheme, where the B3151 joins the A303 near Hawk House. another would be located to the east of Downhead junction, a false cutting would be provided between Howell Hill and Traits Lane, and 3 false cuttings would be provided at Hazlegrove Junction. There would be 2 residential receptors (houses) that would experience significant effects associated with operational noise once the scheme is open to traffic. Secondary glazing will be offered to the owners of these properties, to reduce the adverse effects. Other houses may be subject to minor increases in noise once operational, but these are not considered to be significant because of the little change expected in these localities.

Further details are provided within Chapter 11, Noise and Vibration, of Volume 6.1 of the full Environmental Statement.

# People and communities (including population and health)

The assessment of effects on People and Communities identifies impacts associated with non-motorised users (NMU), driver stress, Amenity, private property, community land and community facilities, severance, local economy, human health and wellbeing and agricultural land.

#### Method of assessment

The assessment of effects on population and health comes from a mixture of desk-based assessment (reviewing online information) and site visits using appropriate guidance and professional judgement of qualified professionals. The study area for this assessment is 250 metres in addition to views from the road and the District of South Somerset for Local Authority impacts.



#### Construction

#### Non-motorised users

Works would be phased during construction to minimise effects on non-motorised users (NMUs). All temporary diversions for NMU's around the work site would be clearly signed, with alternative access arrangements maintained throughout the construction period, as required. Most existing crossings would only be closed once diversions are in place or the new arrangement has been established.

Temporary closures and diversions of public rights of way during construction would result in increases to journey length time for NMUs, until the scheme is open to users.

The only designated A303 crossing for NMU's that would remain open during construction, would be Higher Farm Lane bridge. All other routes would need to be diverted with the alternatives clearly signposted. This means that the impact on NMUs during construction would be minimised, resulting in no significant effects for them.

#### Driver stress

A traffic management plan would be put in place during construction to manage driver stress including diversion routes and signs. During construction, vehicles travelling along 10 of the 13 roads located in the vicinity of the scheme, are predicted to experience temporary but not significant increases in driver stress due to delays to journey time, road closures, diversions and the presence of construction plant. These include the existing A303, an unnamed road through Podimore between A303 at Eastmead Lane and Podimore roundabout, the B3151, an unnamed Downhead local roads between Plowage and Camel Cross, Plowage Lane, Howell Hill, Steart Hill, Traits Lane, Gason Lane and the A359.

#### **Amenity**

Amenity is defined as the relative attractiveness or pleasantness of a route such as a public right of way, or place such as a playing field or park. Mitigation measures to ensure that the amenity value of a route or place is not reduced during construction would involve careful planning of the construction including adherence to the national Considerate Constructors scheme as well as implementing a construction strategy.

Due to the presence of construction material there would be adverse effects on the amenity value of some public rights of way for non-motorised users. However, with mitigation in place the effects are not considered to be significant.

#### Private property

There would be no demolition of private property required for the scheme however, permanent land take would be required from 3 private houses.

Consultation with the owners of land affected by the scheme has been an ongoing process through the development of the scheme. Negotiations about compensation and land purchase have commenced between the District Valuer and landholders.

Community land and community facilities
During construction, Hazlegrove
Preparatory School access route would be
permanently changed, as the only private
access is currently via the Hazlegrove
Roundabout. Provisions would be made
for an alternative access route to the
school.

#### Severance

A small number of public rights of way would be affected by the scheme however, those affected are not used for access to community facilities.

Construction of the scheme would also require several temporary road closures,



resulting in severance for those who rely on those roads to access residential properties, businesses or community resources. Alternative access arrangements would be made available in all instances. Therefore, it is not anticipated that there will be any significant adverse effects during construction.

#### Local economy

The scheme would require a new construction workforce (sourced locally, where possible), which could have a beneficial effect on employment rates in the local area although the number of workers required is likely to be relatively small.

#### Human health

A total of 14 PRoW would be affected, either by land take or by being severed because of new roads built as part of the scheme. Diversion routes would be put in place as appropriate and would be clearly signposted, which would minimise effects to non-motorised user (NMU) journeys.

As the majority of PRoW are used infrequently and with mitigation in place, the effect of the scheme on human health and wellbeing as a result of changes to PRoW, would not be significantly adverse.

#### Agricultural land

Consultation with individual landowners has been undertaken. Land required for temporary use only would be restored following construction and permanent land take would be fully compensated.

The scheme would result in temporary and permanent land-take from high grade agricultural land. There would be additional impacts for individual farm businesses relating to access, severance, agricultural land classification and husbandry. The assessment of potential effects of the scheme on individual farm businesses has identified;

- 15 not significant effects
- a significant adverse effect for 4 farms with 2 reducing to not significant permanently
- a significant adverse effect for 4 farms, considering temporary and permanent land acquisition required for the scheme.

#### **Operation**

#### Non-motorised users

During operation new routes would be provided for NMUs as mitigation for diversions. The scheme would require the permanent diversion of crossings of the A303 between Hazlegrove and Podimore resulting in journey length increases for 7 NMU journeys, and journey length decreases for 3 journeys.

#### Driver stress

Once open to traffic, the scheme would provide a high quality free flowing dual carriageway between the Sparkford Roundabout and Podimore. This would result in improved flows and speeds during busy periods and would be a significant benefit resulting in reduced driver stress.

#### **Amenity**

During operation, effects are considered to be significant beneficial as a result of the improvements to the amenity value of certain footpaths and routes, through the provision of safer crossings of the A303, and changes in traffic flows for journeys where NMUs cross or are alongside the road network.

#### Local economy

Once the scheme is in operation, there is the potential for beneficial effects as the scheme could improve access to future development in the local area.

#### Human health

During operation, the provision of the scheme is anticipated to result in an overall improvement for NMUs, as



although journey lengths may increase for some routes, new and improved routes would be provided as replacements. The scheme would also improve amenity by separating NMUs and vehicular traffic. Improvements to facilities and amenity as a result of the scheme, has the potential to increase usage of NMU facilities within the local area and therefore the physical activity of people using the routes.

### Climate

It is now established that as a result of rising concentrations of Carbon Dioxide (CO2) and other greenhouse gases (GHG) in the atmosphere, a degree of climate change is inevitable and is expected to have significant implications for infrastructure assets in the future, particularly those with long operational lifetimes. Therefore, a climate assessment has been undertaken for the scheme.

#### Method of assessment

For the climate assessment the scheme's effect on the climate (looking at changes to greenhouse gas emissions for example), and the scheme's vulnerability to climate (such as how the new road will react to extreme weather events) have been assessed.

#### **Construction**

Plant equipment and vehicles to be used on the scheme would be selected based on their relative environmental performance taken from a technical specification. Construction works would be carried out in accordance with the best practicable means to reduce fumes or emissions. Mitigation measures would also ensure that the construction of the scheme allows for adaptation to changes in climate.

Due to the short-term nature of construction and limited changes in climate over the 2.5-year construction period, no significant effects are likely for

the scheme associated with vulnerability to climate.

Due to the temporary nature of the construction works it is anticipated that the scheme's effect on climate from greenhouse gas contributions would also not be significant during construction.

#### **Operation**

Mitigation would include appropriate design of the road to ensure low carbon materials are used which would reduce greenhouse gas contributions because of the scheme, including climate resilient features of design. The scheme design also includes allowances for the effects of climate change in terms of drainage and grass features to increase resilience to flooding, and the use of structures to reduce the risk of failure caused by increases in temperature.

During operation, there is the potential for the road and surrounding area to be adversely affected by changes in climate however, these are not likely to be significant.

During operation, there would be no impact on the road and associated infrastructure or emissions during the roads life therefore effects on climate are also not anticipated to be significant.

# Combined and cumulative effects

Combined and Cumulative effects look at both the total combination of all environmental topics assessed, as well as the cumulation of effects from nearby developments. These are assessed separately and discussed below.

# Combined effects Method of assessment

The assessment methodology for combined effects involves the



identification of interactions between environmental topics, to better understand the overall environmental effect of the proposed scheme.

#### **Construction**

The proposed scheme would have an overall significant adverse combined effect during construction. This is due to the significant adverse effects anticipated on cultural heritage and landscape, the combined significant adverse effects on geology and soils, and the not significant adverse combined effects on the other environmental topics.

The combined significant adverse impact on cultural heritage and landscape would be temporary in nature. Therefore, mitigation included under the cultural heritage and landscape topic is considered and no additional mitigation is needed.

#### **Operation**

The proposed scheme would have an overall adverse but not significant combined effect during operation. This is due to the combination of adverse effects on cultural heritage, geology and soils, landscape, material resources, and biodiversity, neutral effects on communities, human health and climate, and the beneficial effects on vehicle travellers.

#### **Cumulative**

#### Method of assessment

When proposed developments have an overlapping zone of influence for environmental effects there is the potential for a cumulation of impacts. For cumulative effects, changes likely to be caused by other developments together with the proposed scheme are identified. Two other developments were identified within the vicinity of the scheme (2 kilometres) as having the potential to coincide with the construction and operational phases of the proposed

scheme. The developments are Haynes Publishing development and a proposed Solar Farm in Queen Camel.

#### **Construction**

We have looked at the cumulative effect of the 2 developments (Haynes Publishing proposed development in Sparkford and a proposed Solar Farm in Queen Camel) alongside the proposed scheme to see if there will be any significant cumulative effect during construction. The assessment has concluded that there would not be any significant adverse effects.

#### **Operation**

During operation the 2 developments (Haynes Publishing proposed development in Sparkford and a proposed Solar Farm in Queen Camel) have been assessed in conjunction with the proposed scheme to identify if the impacts will be significant when taken together. During operation, cumulative effects for the proposed scheme would not be significant.





# Road Drainage and Water Environment

The EIA Scoping Report concluded that there would be no significant effects on the drainage and the water environment and therefore this topic was scoped out of the Environmental Statement. However. water and road drainage were assessed through the Highways Agency Water Risk Assessment Tool, a Water Framework Directive screening and scoping assessment, a Flood Risk Assessment and a Drainage Strategy Report. With the supporting evidence provided in these assessments, it was concluded that there are unlikely to be any significant effects on road drainage and the water environment because of the scheme.

Conventional drainage systems to reduce pollution have been incorporated as part

of the drainage design for the scheme. This includes a multi-stage treatment process, including filtration drains, ponds and manually operated sluices to reduce water pollution from road runoff. The flood risk assessment has been completed alongside the drainage design to ensure that potential risks of changes to flooding are understood and then avoided through the drainage design.

Construction activities would be managed by best practice construction measures to be included within the full Construction Environmental Management Plan for the scheme in accordance with best practice in relation to pollution prevention and water management is set out in CIRIA's 'Environmental good practice on site', CIRIA's 'Control of water pollution from linear construction projects; Technical Guidance' and the Environment Agency's 'Protect groundwater and prevent groundwater pollution'.





# What happens next?

The Environmental Statement and supporting documents can be viewed online at <a href="https://infrastructure.planninginspectorate.gov.uk/projects/south-west/a303-sparkford-to-ilchester-dualling/?ipcsection=docs">https://infrastructure.planninginspectorate.gov.uk/projects/south-west/a303-sparkford-to-ilchester-dualling/?ipcsection=docs</a>. Printed hard copies will be available to view at:

- Haynes International Motor Museum, Sparkford, Yeovil, BA33 7LH.
- Yeovil Library, King George Street, Yeovil BA20 1PY.

We have submitted the Environmental Statement to the Planning Inspectorate as part of our application for a Development Consent Order (DCO). The Planning Inspectorate has been appointed by the Secretary of State to examine the application. Granting of the order would give us the legal power to proceed with the scheme.

At the time of publication of this Non-Technical Summary, the DCO application has just entered the acceptance period, which has a maximum period of 28 days. On receipt of the application, the Planning Inspectorate will upload documents to its website and will contact local authorities for confirmation of the adequacy of the pre-application consultation. If satisfactory responses are received and all the necessary documents have been provided, the Planning Inspectorate will accept the application and the pre-examination stage will begin. Registered interested parties can send written comments to the Planning Inspectorate and can ask to speak at a public hearing. The examination will last a maximum of 6 months.

The Examining Authority will then have 3 months to consider its recommendation. This recommendation and a supporting report will then be passed to the Secretary of State for Transport, who will have 3 months to decide whether to grant a Development Consent Order.

Finally, when the Secretary of State's decision is published, there will be a 6-week High Court challenge period. If there are no High Court challenges, the decision will be final.





format or medium, under the terms of the Open Government Licence.

To viewthis licence: visit www.nationalarchives.gov.uk/doc/open-government-licence/ write to the Information Policy Team, The National Archives, Kew, London TW9 4DU, or email psi@nationalarchives.gsi.gov.uk.

If you have any enquiries about this publication email info@highwaysengland.co.uk.

Printed on paper from well-managed forests and other controlled sources.

Registered office Bridge House, 1 Walnut Tree Close, Guildford GU1 4LZ Highways England Company Limited registered in England and Wales number 09346363

