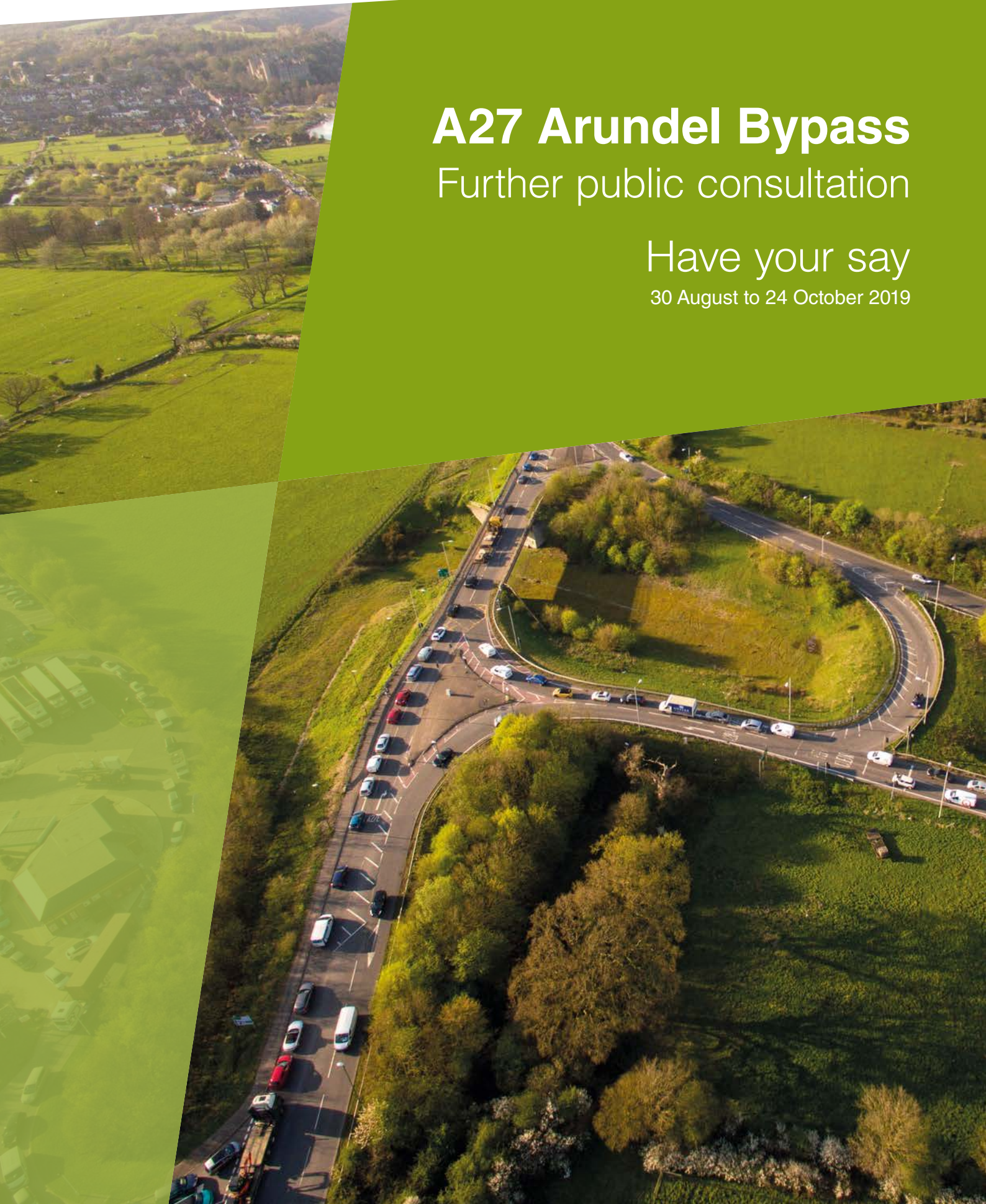


# A27 Arundel Bypass

Further public consultation

Have your say

30 August to 24 October 2019





# A27 Arundel Bypass

Further public consultation

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## Introduction

### Investing in your roads

At Highways England, we believe in a connected country and our network makes these connections happen. We strive to improve our major roads and motorways – engineering the future to keep people moving today and moving better tomorrow. We want to make sure all our major roads are more dependable, durable and most importantly safe. That's why we're delivering £15 billion of investment on our network – the largest investment in a generation.

The A27 Arundel Bypass is part of this investment: by reducing congestion in the area, the scheme will improve journeys along the corridor between Brighton and Portsmouth, which would provide benefits for the local and regional economy.

In this brochure, we explain our six proposed options for the A27 Arundel Bypass scheme, based on the latest available information, and set out how you can give us your feedback during our public consultation.

All consultation materials, including supporting technical documents are available from  
[www.highwaysengland.co.uk/a27arundel](http://www.highwaysengland.co.uk/a27arundel)

This is a revised version of the consultation brochure published on 13 September 2019

### How to respond

We're holding a public consultation on our proposals. We'd like to hear what you think, so please share any views, ideas or local knowledge that you may have. The consultation is open for eight weeks, between 30 August and 24 October 2019, and there are lots of ways to have your say. Why not fill in the consultation response form online or come along to one of our public consultation exhibitions? Full details of how you can respond are below.

Your comments will help us better understand the local area and any potential impacts our proposals may have on the community. We will listen to everyone's feedback and consider all comments before we select a preferred option.

Please respond using one of the following methods by **11:59pm on 24 October 2019**. Responses received after this time may not be considered.

- **Online:** complete the consultation response form online via [www.highwaysengland.co.uk/a27arundel](http://www.highwaysengland.co.uk/a27arundel)
- **Freepost:** complete the consultation response form and return it to **Freepost A27 ARUNDEL**
- **In person:** complete the consultation response form and hand it to a member of staff at a public exhibition

If you have any questions, or would like the information in a different format, please contact us by:

- **Email:** [A27ArundelBypass@highwaysengland.co.uk](mailto:A27ArundelBypass@highwaysengland.co.uk)
- **Telephone: 0300 123 5000 (24 hours)**



## Public exhibitions

You can find out more about the options at our staffed public consultation exhibitions, where the project team will be on hand to answer your questions.

Date	Location	Time	Address
Friday 30 August	Cathedral Centre	5.30pm-8pm	London Road, Arundel, BN18 9BA
Tuesday 10 September	The White Swan	3.30pm-8pm	Chichester Road, Arundel, BN18 0AD
Wednesday 11 September	Whiteways car park, South Downs National Park (our consultation van will be on-site)	11am-1pm	Bury Hill, Houghton, BN18 9FD
Wednesday 11 September	Impulse Leisure Centre car park, Storrington (our consultation van will be on-site)	3pm-6pm	Spierbridge Road, Storrington, Pulborough, RH20 4PG
Saturday 14 September	Fontwell Park Racecourse	10:30am-2.30pm	Arundel Road, Fontwell, Arundel, BN18 0SY
Thursday 19 September	Coronation Hall, Slindon	2pm-8pm	Reynold's Lane, Slindon, West Sussex, BN18 0QT
Saturday 28 September	Walberton Village Hall	10am-5pm	The Street, Walberton, Arundel, BN18 0PJ
Tuesday 1 October	Littlehampton Town Council – Manor House, Littlehampton	2pm-8pm	Manor House, Church Street, Littlehampton, BN17 5EW
Tuesday 8 October	Mill Road car park (near Arundel Castle), Arundel (our consultation van will be on-site)	11am-2pm	Mill Road, Arundel, BN18 9PA
Saturday 12 October	Arundel Town Hall	10:30am-4pm	Maltravers Street, Arundel, BN18 9AP

We will also hold unstaffed exhibitions, where visitors can view some consultation materials and collect printed copies of the consultation response form. These exhibitions will be held at the locations below, during the venues' normal opening hours. All consultation materials are available from [www.highwaysengland.co.uk/a27arundel](http://www.highwaysengland.co.uk/a27arundel)

Date	Location	Address
Monday 16 - Tuesday 17 September	Bognor Regis Town Hall	Clarence Road, Bognor Regis, PO21 1LD
Wednesday 25 September	Storrington Library	Ryecroft Lane, Storrington, Pulborough, RH20 4PA
Wednesday 9 October	Yapton Village Hall	Main Road, Yapton, BN18 0ET
Monday 14 - Friday 18 October	Arun Civic Centre	Maltravers Road, Littlehampton, BN17 5LF

## Locations to collect consultation material

You can find copies of the brochure and consultation response form at the following deposit points throughout the consultation period (30 August to 24 October 2019), during the locations' normal opening hours. Reference copies of supporting technical documents will also be available.

Location	Address
Angmering Library	Arundel Road, Angmering, Littlehampton, BN16 4JS
Arundel Library	Surrey Street, Arundel, BN18 9DT
Arundel Town Hall	Maltravers Street, Arundel, BN18 9AP
Bognor Regis Library	69 London Road, Bognor Regis, PO21 1DE
East Preston Library	The Street, East Preston, Littlehampton, BN16 1JJ
Littlehampton Library	Maltravers Road, Littlehampton, BN17 5NA
Rustington Library	Claigmar Road, Rustington, BN16 2NL

## About the A27 Arundel Bypass

The A27 Arundel Bypass scheme is identified within the Government's 2015-2020 Road Investment Strategy (RIS1), which states that England's strategic road network requires upgrading and improving to ensure it can deliver the performance needed to support the nation in the 21st century.

A budget of between £100-£250 million has been allocated to the scheme. The scope of the A27 Arundel Bypass scheme described in the Road Investment Strategy is: *"the replacement of the existing single carriageway road with a dual carriageway bypass, linking together the two existing dual carriageway sections of the road"*.

The 'existing single carriageway road' proposed to be replaced lies within to the six-kilometre section of the A27 from the A284 Crossbush junction (east of Arundel) to the west of Yapton Lane (west of Arundel). The A27 currently goes through the South Downs National Park and Arundel crossing the River Arun and the railway line.

## Background to the further consultation

In May 2018, we announced a preferred route for the proposed A27 Arundel Bypass, known as Option 5AV3, following public consultation in autumn 2017. We then began developing the design as part of our work towards submitting an application for consent from the Secretary of State. This included looking at alternatives for minimising impacts on protected ancient woodland and biodiversity at the western end of the route.

We discovered new information during the course of this work. We therefore want to understand your views on the revised options for the scheme based on the latest available information, which we are presenting through this further consultation.

Views received during this consultation will be important in helping us to ensure that we find the best long-term solution for the area.

Inside this brochure, you will find details of the six proposed improvement options for the A27 around Arundel. You'll also find information explaining how we have developed the options, along with a summary of key benefits and impacts.


Figure 1: Scope of scheme





Please note that this consultation brochure contains only summary information regarding the proposals. For more detail, please refer to the supporting technical documents:

 *Environmental Assessment Report (EAR)*,  
 *Interim Scheme Assessment Report (Interim SAR)* and the  *Combined Modelling and Appraisal Report (ComMA)*, which are available from [www.highwaysengland.co.uk/a27arundel](http://www.highwaysengland.co.uk/a27arundel)

You will see the  icon throughout this brochure indicating where more detailed technical information is available.

## Other A27 schemes in the Road Investment Strategy

Although the A27 Arundel Bypass scheme is part of a wider programme of investment, it is a standalone scheme and would bring about significant benefits to the area. Other improvements along the A27 were also identified within the Road Investment Strategy (RIS1). The current position of these other A27 schemes is:

- **A27 East of Lewes:** In summer 2017, a preferred route was announced and since then the preliminary design for this scheme has been developing. Public information exhibitions for both junctions and shared use paths were held in March and July 2019, respectively. Works are planned to start from spring 2020. More information can be found at: [www.highwaysengland.co.uk/a27-east-of-lewes](http://www.highwaysengland.co.uk/a27-east-of-lewes)
- **A27 Worthing and Lancing improvements:** The current scheme is paused and remains part of the RIS1 package of works. As set out in our Delivery Plan Update 2019-20, the scheme is under review in order to best meet the needs of the local stakeholders. More information can be found at: [www.highwaysengland.co.uk/a27-worthing-and-lancing-improvement](http://www.highwaysengland.co.uk/a27-worthing-and-lancing-improvement)

- **A27 Chichester Bypass:** The scheme is no longer part of the RIS1 package of works. As set out in our Delivery Plan Update 2019-20, it has been stopped as agreed with the Department for Transport. More information can be found at [www.highwaysengland.co.uk/projects/a27-chichester/](http://www.highwaysengland.co.uk/projects/a27-chichester/)

## Why we need this scheme

- The A27 is the only major east-west trunk road south of the M25. It links many of the towns and cities along the south coast, including Portsmouth, Chichester, Arundel, Brighton and Hove, Lewes and Eastbourne, serving a combined population of more than one million<sup>1</sup> people, as well as a large number of businesses.
- The smooth running of this road plays a key part in the region's success. West Sussex attracts, on average, 17 million visitor days per year, worth approximately £508 million to the local economy<sup>2</sup>.
- On either side of Arundel, the A27 is a dual-carriageway with capacity to carry existing traffic flows and more able to cope with future traffic growth. The single carriageway section of the A27 through Arundel creates a bottleneck that holds up traffic, costing commuters, businesses, communities and visitors valuable time and money.
- Congestion around Arundel results in some drivers seeking alternative routes which are less suited to higher traffic flows. Residents in local towns and villages are affected by increases in through traffic, while air quality is also a concern, most notably in Storrington which was identified by the World Health Organisation as one of the poorest places for air quality in the UK<sup>3</sup>.
- The A27 currently has a poor safety record, with a higher than average accident rate for rural A-roads<sup>4</sup>.

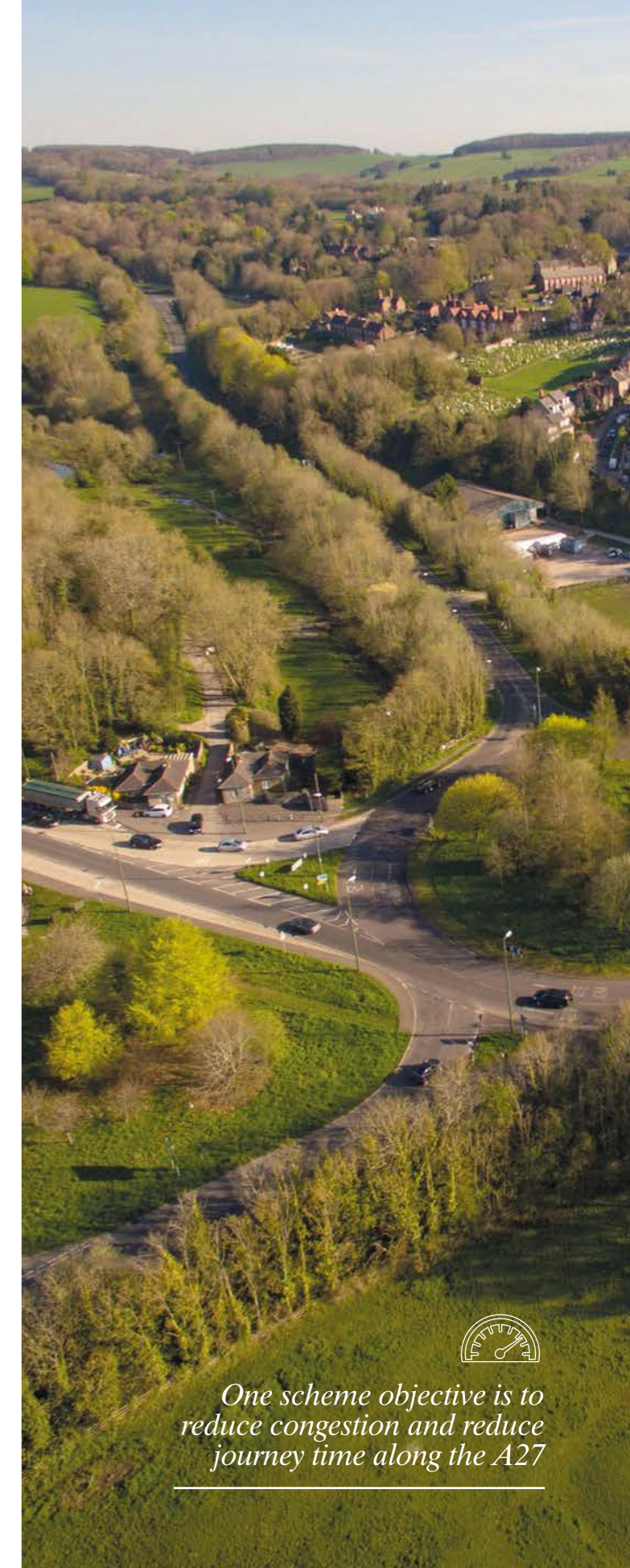
- Relatively poor transport connectivity in the area has contributed to pockets of deprivation by restricting access to employment opportunities. For example, Littlehampton has some of the highest levels of deprivation in the country, partly because local people have reduced access to employment (especially higher paid, higher value jobs) than elsewhere in the region<sup>5</sup>. Improving connectivity could help tackle this inequality.

## Scheme objectives

Our scheme objectives have been developed while working with the local authorities, the South Downs National Park Authority, other environmental bodies, the emergency services and the Department for Transport (DfT).

The scheme objectives are to:

- Improve the safety of travellers along the A27 and consequently the wider local road network.
- Ensure that customers and communities are fully considered throughout the design and delivery stages.
- Improve capacity of the A27 whilst supporting local planning authorities to manage the impact of planned economic growth.
- Reduce congestion, reduce travel time and improve journey time reliability along the A27.
- Improve accessibility for all users to local services and facilities.
- Deliver a scheme that minimises environmental impact and seeks to protect and enhance the quality of the surrounding environment through its high-quality design.
- Respect the South Downs National Park and its special qualities in our decision-making.



*One scheme objective is to reduce congestion and reduce journey time along the A27*

<sup>1</sup> Based on census 2011 population data for these districts; Portsmouth, Havant, Chichester, Arundel, Worthing, Adur, Brighton and Hove, Lewes, and Eastbourne.  
<sup>2</sup> The GB Day Visitor Statistics 2015, VisitBritain.  
<sup>3</sup> WHO report available here [http://www.who.int/airpollution/data/aap\\_air\\_quality\\_database\\_2018\\_v12.xlsx?ua=1](http://www.who.int/airpollution/data/aap_air_quality_database_2018_v12.xlsx?ua=1) with further information about air quality from WHO accessible here <https://www.who.int/airpollution/en/>  
<sup>4</sup> In the latest 5-year period (1 January 2013 to 31 December 2017) there have been 81 personal injury collisions, resulting in 121 casualties, recorded between Crossbush junction to the east and Yapton Lane to the west.

<sup>5</sup> For more detail see the Interim Scheme Assessment Report (SAR).

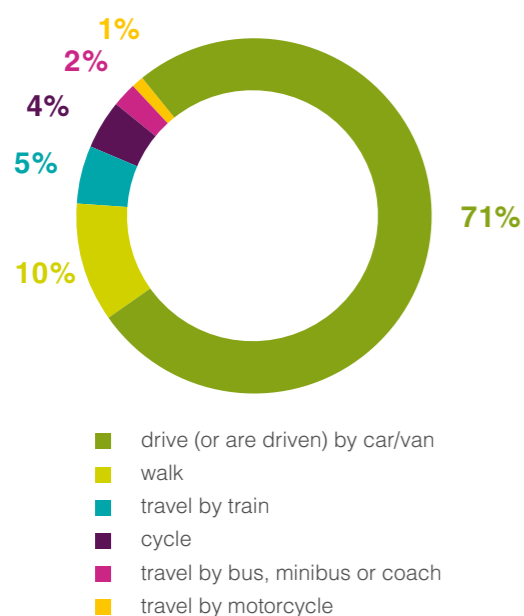


## How people travel in the Arundel area

There is relatively low use of public transport, walking and cycling in the area. This means that even a significant increase in these modes of transport would be unlikely to solve the problems of queuing and congestion on the A27 through Arundel. Furthermore, planned population increases during the coming years, would likely make these issues worse.

The car is an important means of transport in the area. Arun District residents travel to work using the following transport modes<sup>6</sup>.

### Mode of travel



## Review of alternative transport options

### Bus

There are no significant plans for bus improvements in the area. With the relatively low proportion of bus use in the area, there is no current evidence to suggest that bus services could accommodate the overall future demand for travel.

### Rail

There have been two studies about rail infrastructure investments for the south coast corridor. One study looked at infrastructure investment priorities for railways from London to the south coast, and the other explored opportunities to improve the Coastway rail service. Neither study recommended improvements in the area as a priority, nor found that the improvements would offer good value for money. We understand that Network Rail is currently assessing options for West Coastway and Arun Valley line enhancements, although we have no current evidence to suggest that there would be any significant switch from road use to rail use (along the A27 corridor between Chichester and Brighton) that would meet the overall future demand for travel.

## Route options

### Route option development

After announcing in October 2018 our intention to carry out further consultation, we took a fresh look at the full range of possible route alignments. These were grouped by corridor (or similar route alignments) and then sifted according to compliance with the scheme objectives and legal and national planning policy tests, including consideration of environmental impacts.

Our technical work concluded that six options should be put forward for consideration as part of this further consultation. These are shown in [Figure 2](#). For ease of reference, we have assigned a colour to each option.

All options would support the local housing and employment growth strategies of the local authorities and cater for traffic growth until at least 2041<sup>7</sup>. However, there are significant environmental constraints and national planning policy risks that affect all six options as outlined in the following pages.

For further details on the process we followed to identify these six options, please see the [Interim Scheme Assessment Report \(Interim SAR\)](#). For more information on the longer history of the scheme dating back to the 1980s, please see [Interim Scheme Assessment Report \(Interim SAR\)](#) which is available on our website.

### Funding the scheme

As outlined on page 5, a £100-£250 million budget remains allocated to the scheme. However, the estimated costs have increased since the consultation in 2017 due to a number of factors. For example, new environmental surveys carried out in mid/late 2018 indicated that further environmental mitigation would be needed than had previously been anticipated, while costs associated with constructing an embankment across the floodplain have risen.

There has also been an associated increase in construction duration, while changes to the overall scheme timeline have also added to costs and inflation<sup>8</sup>. The cost ranges published within this consultation are early estimates based on work done to date and as such do not represent our final costs for the project. We will continue to develop our design in such a way that seeks to deliver the best possible value for money in line with the needs of the scheme.

For more info on costs, including benefit to cost ratios, please see page 28 and 29.

### Route descriptions

Key features of all options would include:

- A new viaduct spanning over the River Arun and a bridge over the Arun Valley Railway.
- A junction at Crossbush with access to and from the A27 in both directions.

- A speed limit of 70 mph (in its current design, the Beige option - 1V9 - would need a 50 mph speed limit in some sections).
- An embankment across the River Arun floodplain, although all routes could alternatively be built with a viaduct. A decision on this will be taken once a preferred route is confirmed and more detailed design work is undertaken.

Please refer to the [Interim Scheme Assessment Report \(Interim SAR\)](#) for more information.

### Ford Road junction

We received feedback from the 2017 consultation expressing interest in having a new junction with Ford Road. The options put forward in this further consultation do not feature such a junction, but we have not discounted this idea. The scheme design is flexible enough that each of the offline options could include a junction at Ford Road. As a result, this will be considered further during the next design stage, once we have identified a new preferred route. Please refer to our [Interim Scheme Assessment Report \(Interim SAR\)](#) for more information.

### Walking, cycling and horse riding

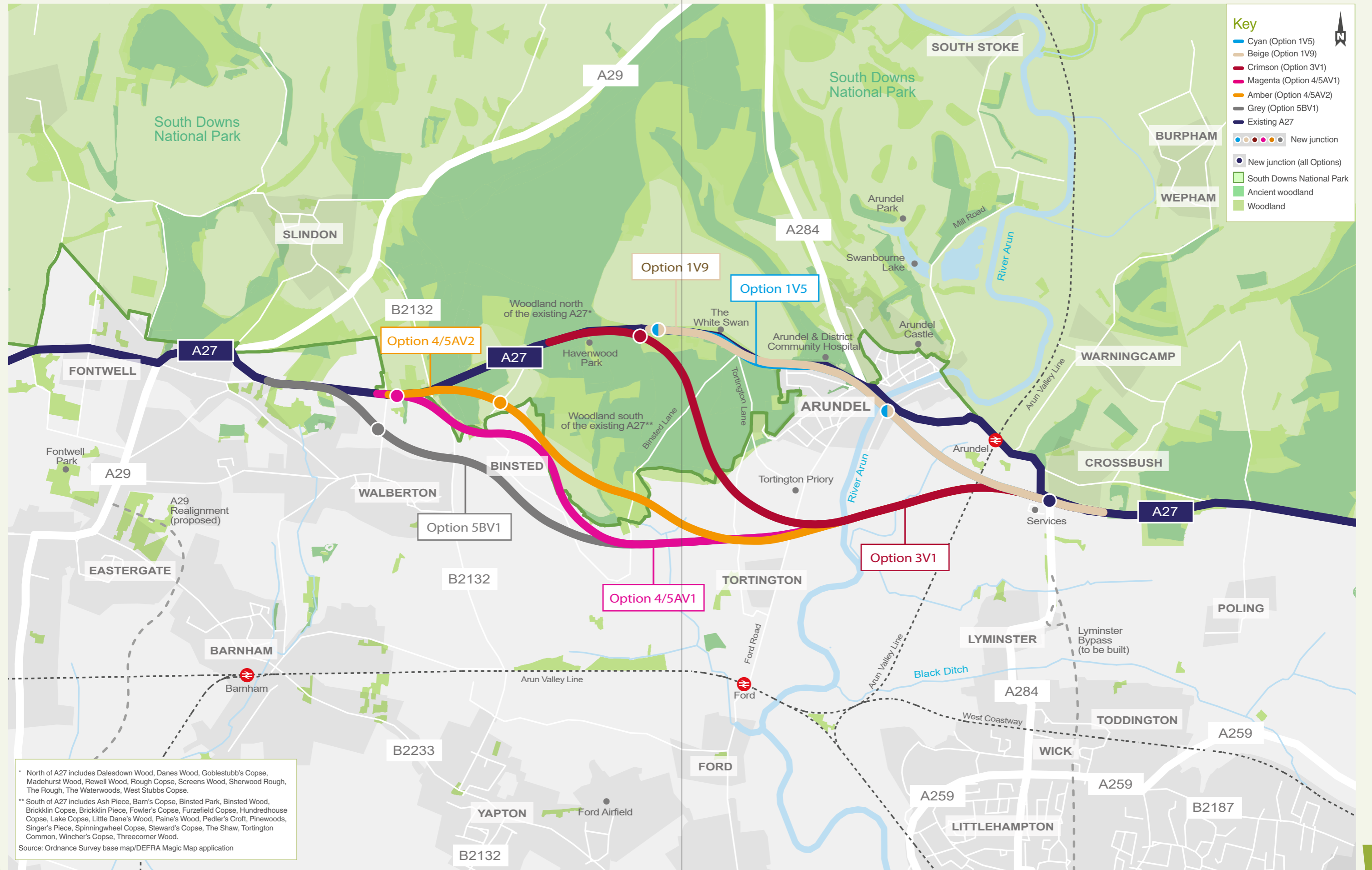
Access would be maintained for pedestrians, cyclists and horse riders across all six options, although some existing routes would need to be diverted. More detail can be found in the [Interim Scheme Assessment Report \(Interim SAR\)](#).

<sup>6</sup> Method of travel to work 2011 Census Nomis (Nomis is a service provided by the Office for National Statistics, providing free access to detailed, up-to-date UK labour market statistics from official sources). 6% 'work from home' and 1% were categorised as 'other'.

<sup>7</sup> 2041 would be 15 years from the scheme opening date which is currently planned for 2026. The 15-year timeframe is Highways England standard for scheme design performance assessments.

<sup>8</sup> Ideas of areas where costs could be reduced are set out in the Interim Scheme Assessment Report (Interim SAR).

Figure 2: Scheme options



### Cyan (Option 1V5)

Cyan (Option 1V5) would feature 4.5km (approx.) of new dual two-lane carriageway between Crossbush and the existing transition between single and dual carriageway to the west of Arundel. The viaduct extends over the Ford Road junction with no direct access to the local road network. Key features would include:

- 2.5km (approx.) of dual two-lane carriageway to the south of the existing A27 east of the River Arun
- 2.0km (approx.) of dual two-lane carriageway west of the River Arun
- New access to Arundel and District Community Hospital off the A284
- 1.92km (approx.) of the existing single carriageway within the South Down National Park replaced with dual carriageway and resulting in the loss of 1.95 hectares (approx.) of ancient woodland
- Fitzalan Road would be realigned to pass under the A27 and connect to the existing A27 at a new junction
- The existing A27 junction with Jarvis Road would be closed. Alternative access would be from the existing local road network
- Properties fronting the existing A27 would have their current access closed and alternative access provided by new local roads joining a new junction near Long Lane, with the side road passing over the A27. The new junction would have access to/from the A27 in both directions
- 2.2km (approx.) of the existing A27 between Ford Road roundabout and Crossbush junction returned to the local road network, subject to agreement with West Sussex County Council

### Beige (Option 1V9)

Beige (Option 1V9) would feature 4.5km (approx.) of new dual two-lane carriageway between Crossbush and the existing transition between single and dual carriageway to the west of Arundel. The junction at Ford Road would be a traffic signal controlled 'through about'. Key features would include:

- 2.4km (approx.) of dual two-lane carriageway to the south of the existing A27 east of the River Arun
- 2.1km (approx.) of dual two-lane carriageway west of the River Arun with reduced cross section width
- A left-in, left-out junction to Arundel and District Community Hospital using the eastbound carriageway
- Fitzalan Road would be realigned to pass under the A27 and connected to the existing A27 at a new junction
- The existing A27 junction with Jarvis Road would be closed. Alternative access would be from the existing local road network
- A left in, left out junction at Tortington Lane using the westbound carriageway
- 1.93km (approx.) of the existing single carriageway within the South Downs National Park replaced with dual carriageway and resulting in the loss of 1.09 hectares (approx.) of ancient woodland
- Properties fronting the existing A27 would have their current access closed and alternative access provided by new local roads joining a new junction near Long Lane, with the side road passing over the A27. The new junction would have access to/from the A27 in both directions
- 1.9km (approx.) of the existing A27 between Ford Road roundabout and Crossbush junction, returned to the local road network, subject to agreement with West Sussex County Council

### Crimson (Option 3V1)

Crimson (Option 3V1) would feature 6km (approx.) of new dual two-lane carriageway bypass located to the south of the existing A27. Starting in the east at Crossbush and ending just west of Havenwood Park. Key features would include:

- 2.28km (approx.) would be located within the South Downs National Park and resulting in the loss of 9.20 hectares (approx.) of ancient woodland
- A new junction to the east of Havenwood Park with the side road passing over the A27 with westbound access to the A27 and eastbound access from the A27
- The existing access to Havenwood Park would be closed and alternative access provided by a new local connector road to Binsted Lane
- 4.0km (approx.) of the existing A27 between the proposed junction (east of Havenwood Park) and the Crossbush junction, returned to the local road network, subject to agreement with West Sussex County Council

### Magenta (Option 4/5AV1)

Magenta (Option 4/5AV1) would feature 7.2km (approx.) of new dual two-lane carriageway bypass located to the south of the existing A27. Starting in the east at Crossbush and ending just west of the existing B2132 Yapton Lane and Shellbridge Road junction. Key features would include:

- New bridge over Binsted Rife
- 0.74km (approx.) of the route would be located within the South Downs National Park and resulting in the loss of 0.40 hectares (approx.) of ancient woodland
- A full movement junction with the existing A27 and B2132 Yapton Lane and Shellbridge Road, with the side road passing over the A27
- Closure of the existing junctions with the A27 at Mill Road and Tye Lane
- Closure of Hedgers Hill Road as a through route other than for pedestrians, cyclists and horse riders
- 6.1km (approx.) of the existing A27 between the B2132 junction at Yapton Lane and Shellbridge Road and Crossbush junction, returned to the local road network, subject to agreement with West Sussex County Council

### Amber (Option 4/5AV2)

Amber (Option 4/5AV2) would feature 6.9km (approx.) of new dual two-lane carriageway located to the south of the existing A27. The proposed route would start in the east at Crossbush and would end just west of existing B2132 at Yapton Lane and Shellbridge Road junction. Key features would include:

- New bridge over Binsted Rife
- 1.97km (approx.) would be located within the South Downs National Park and resulting in the loss of 1.83 hectares (approx.) of ancient woodland
- New junction with the existing A27 at Binsted Lane east of Walberton, with the A27 passing under Binsted Lane. This allows for westbound access to the A27 from Binsted Lane and eastbound access from the eastbound carriageway of the A27 to Binsted Lane
- Closure of Hedgers Hill Road as a through route other than for pedestrians, cyclists and horse riders
- Closure of the existing junctions with the A27 at Mill Road and Tye Lane
- A left-in, left-out junction at Shellbridge Road using the eastbound carriageway
- A left-in, left-out junction at Yapton Lane using the westbound carriageway
- 6.2km (approx.) of the existing A27 between the B2132 junction at Yapton Lane and Shellbridge Road and Crossbush junction, returned to the local road network, subject to agreement with West Sussex County Council

### Grey (Option 5BV1)

Grey (Option 5BV1) would feature 8km (approx.) of new dual two-lane carriageway located to the south of the existing A27. The proposed route would start in the east at Crossbush and end east of the A27/ A29 Fontwell (east) roundabout. Key features would include:

- New bridge over Binsted Rife
- New junction with the existing A27 at Tye Lane to the north of Walberton (with the A27 continuing via an underpass) enabling westbound access onto the A27 and an eastbound access from the A27. Closure of Tye Lane south of the proposed route
- 6.6km (approx.) of the existing A27 between the junctions with Tye Lane and Mill Road and Crossbush junction, returned to the local road network, subject to agreement with West Sussex County Council



# Comparing the routes

## How the options compare: benefits and impacts

A high-level summary<sup>9</sup> of the benefits and impacts of the six options is presented below.

For more details on any of the following content, please refer to the [Interim Scheme Assessment Report \(Interim SAR\)](#), [Combined Modelling and Appraisal Report \(ComMA\)](#) and [Environmental Assessment Report \(EAR\)](#).

If you have different views or local information we should be aware of, please tell us in your response to the consultation.

## How the options compare: traffic

All our options have been tested in the same way, based on the latest available information, so that their performance can be compared<sup>10</sup>. We compared how well they cope with the expected

traffic levels in 2041 taking account of all known developments in the area and anticipated economic growth<sup>11</sup>.

Figure 3 on page 18 shows how each of the options would affect the number of vehicles using the local road network in 2041<sup>12</sup> relative to a 'do minimum'<sup>13</sup> scenario. It shows that a high proportion of traffic would use a new bypass in preference to the existing road and other routes to the north and south of Arundel. The traffic flows are measured as Annual Average Daily Traffic (AADT) flow – the daily total flow of vehicles (in both directions) averaged across the year, but we also test how peak time traffic would be affected.

We also tested a 'do minimum' scenario. This showed that if the existing A27 is not improved, motorists who currently use local roads to avoid delays would continue to do so. For more information about the traffic modelling work, please see the [Combined Modelling and Appraisal Report \(ComMA\)](#).

More information is also contained within the 'traffic heat maps' available on our website: [www.highwaysengland.co.uk/a27arundel](http://www.highwaysengland.co.uk/a27arundel)

## Benefits and impacts

Objective	Cyan (Option 1V5)	Beige (Option 1V9)	Crimson (Option 3V1)	Magenta (Option 4/5AV1)	Amber (Option 4/5AV2)	Grey (Option 5BV1)	
<p>Improve the safety of travellers along the A27 and consequently the wider local road network</p>	<p>For the Cyan and Beige options, traffic which currently uses local roads to avoid congestion would use the improved A27 instead, leading to fewer accidents. However, the benefit would be lower than the Magenta, Amber and Grey options. For the Crimson option, safety improves to a similar degree as the Cyan and Beige options. The impact is less than the Magenta and Amber options due to the shorter bypass section. For the Magenta, Amber and Grey options, there are significant safety benefits, with the Amber option providing the greatest improvements, as traffic is diverted from the local roads onto the new A27. Accidents avoided are calculated over a 60-year period (from opening in 2026 to 2085) compared to a 'do minimum'<sup>14</sup> scenario where 55,484 accidents would occur.</p>	<p>411 ACCIDENTS AVOIDED</p>	<p>397 ACCIDENTS AVOIDED</p>	<p>379 ACCIDENTS AVOIDED</p>	<p>527 ACCIDENTS AVOIDED</p>	<p>727 ACCIDENTS AVOIDED</p>	<p>676 ACCIDENTS AVOIDED</p>
<p>Throughout the design and delivery stages, the scheme should ensure that customers are fully considered</p>	<p>Visual, noise and severance impacts on communities will be mitigated, where possible, but all options would have significant impacts on different communities. For further details, please refer to 'How the options compare: environmental assessment' on page 24. All options would have an impact on agricultural land with the Cyan and Beige options taking the least amount of agricultural land. The Grey option would take the most agricultural land, followed by the Magenta, Amber and Crimson options. We will work closely with affected landowners to mitigate the impacts and provide accommodation works through agreement. The Magenta and Grey options would also affect the golf course at Avisford Park. The approximate number of residential properties located within 50m of the scheme footprint are illustrated below.</p>	<p>120 RESIDENTIAL PROPERTIES</p> <p>36-month construction timeframe</p>	<p>142 RESIDENTIAL PROPERTIES</p> <p>34-month construction timeframe</p>	<p>3 RESIDENTIAL PROPERTIES</p> <p>36-month construction timeframe</p>	<p>29 RESIDENTIAL PROPERTIES</p> <p>32-month construction timeframe</p>	<p>21 RESIDENTIAL PROPERTIES</p> <p>32-month construction timeframe</p>	<p>41 RESIDENTIAL PROPERTIES</p> <p>36-month construction timeframe</p>

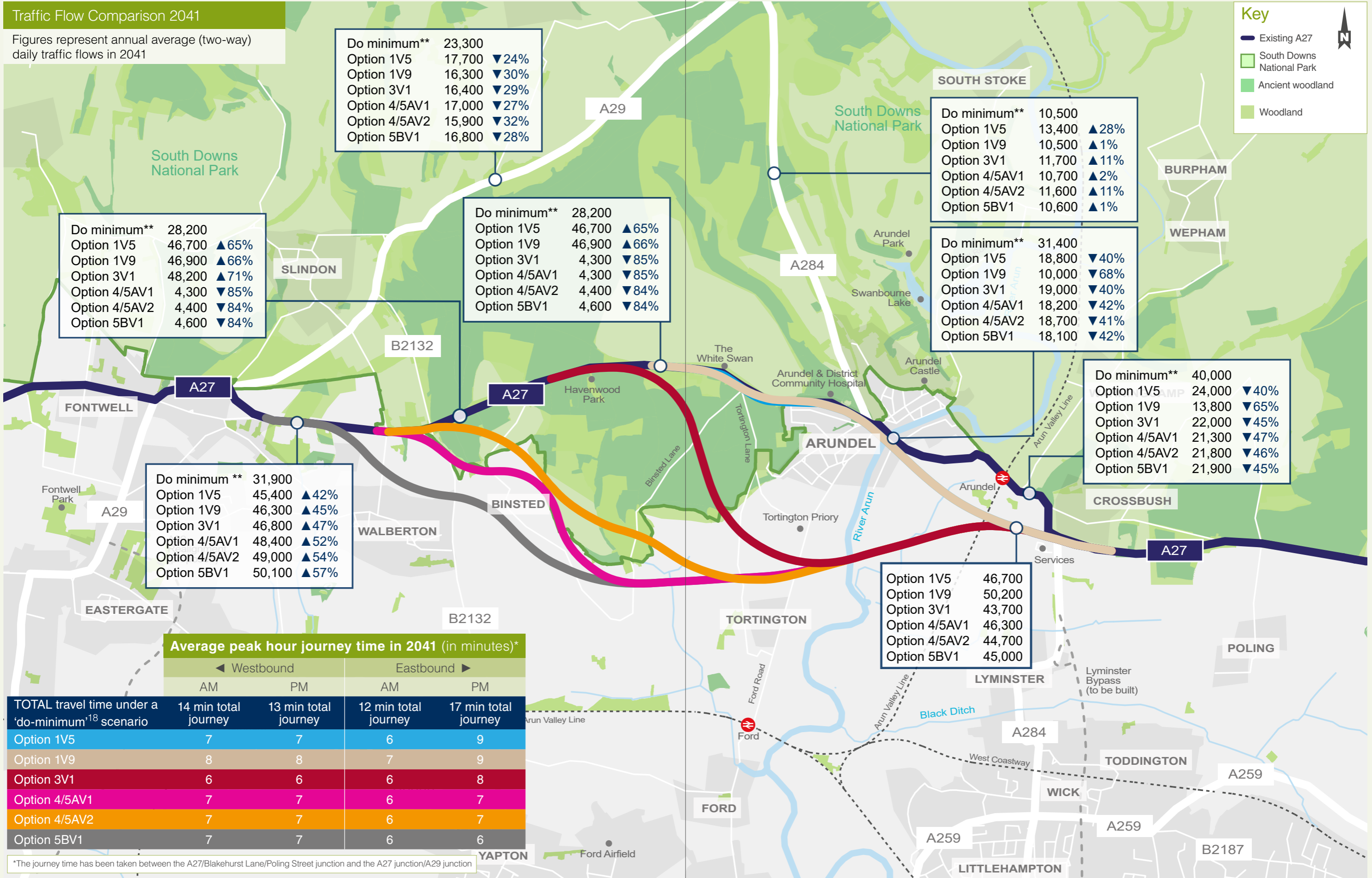
Objective	Cyan (Option 1V5)	Beige (Option 1V9)	Crimson (Option 3V1)	Magenta (Option 4/5AV1)	Amber (Option 4/5AV2)	Grey (Option 5BV1)			
<p>Improve capacity of the A27 whilst supporting local planning authorities to manage the impact of planned economic growth</p>	<p>The Cyan option journey time savings would reduce business costs, save time and provide business and employment opportunities throughout the wider area.</p>	<p>The Beige option would be close to capacity by 2041, making congestion and delays more likely from that point. All other impacts/benefits similar to the Cyan option.</p>	<p>Remaining options are, as per the benefits for the Cyan option, although these options would provide additional journey time savings that aid business efficiency particularly in the longer term.</p>	<p>Route would operate at around 45-60% capacity in 2041</p>	<p>Route would operate at around 85-90% capacity in 2041</p>	<p>Route would operate at around 45-60% capacity in 2041</p>	<p>Route would operate at around 45-60% capacity in 2041</p>	<p>Route would operate at around 45-60% capacity in 2041</p>	
<p>Reduce congestion, reduce travel time<sup>15</sup> and improve journey time reliability along the A27</p>	<p>6-8 minutes saved</p>	<p>4-8 minutes saved</p>	<p>6-9 minutes saved</p>	<p>6-10 minutes saved</p>	<p>6-10 minutes saved</p>	<p>6-11 minutes saved</p>			
<p>Improve accessibility for all users to local services and facilities</p>	<p>All options would attract traffic onto the A27 and off the local road network, which would improve accessibility to local services and reduce congestion in Arundel. The Beige option would provide more direct access from Arundel onto the A27 than the other options, although the Ford Road roundabout would become congested after 2041.</p> <p>For the Cyan option, a new access to the hospital would be built. For the Beige option, access to the hospital would be away from the new A27 dual carriageway, making it slightly less accessible than the Cyan option. For the Crimson, Magenta, Amber and Grey options access to the hospital remains unchanged.</p>	<p>All six options would have significant potential environmental impacts with the potential to adversely impact biodiversity, heritage features, landscape, soils, noise and hydrology. These impacts could be both direct (such as loss of habitat area) or indirect (such as edge effects and fragmentation of woodland areas). However, some impacts can be mitigated and compensated through design and construction phase environmental management. The design development process takes into account environmental considerations through numerous iterations – from initial concept through to detailed design. Further detail can be found in the Environmental Assessment Report (EAR). Each option would impact<sup>16</sup> woodland to a varying degree, as shown below:</p>	<p>Impacting 8.37 hectares of woodland</p>	<p>Impacting 7.44 hectares of woodland</p>	<p>Impacting 20.57 hectares of woodland</p>	<p>Impacting 3.51 hectares of woodland</p>	<p>Impacting 5.33 hectares of woodland</p>	<p>Impacting 1.49 hectares of woodland</p>	
<p>Respect the South Downs National Park (SDNP) and its special qualities in our decision-making<sup>17</sup></p>	<p>Reducing congestion on the A27 is likely to reduce traffic on other less suitable routes through the South Downs National Park. However, the scheme could have impacts on landscape, biodiversity, tranquillity, farming and enterprise, recreation and learning, heritage and communities. The South Downs National Park Authority has been engaged from an early stage of the design for the scheme and would continue to be involved in the process. The design of the preferred option would incorporate best practice mitigation measures to minimise any potential effects on the National Park.</p> <p>The additional lanes and additional traffic would generally result in an increase in existing effects on the special qualities of the National Park.</p>	<p>The new route corridor would require land take from the National Park. The new transport corridor and introduction of traffic in these otherwise tranquil areas would introduce a range of new effects on the special qualities of the National Park and its setting.</p>	<p>There would be less direct impact on the National Park as the route is outside the National Park boundary, but its setting and views from within the National Park may be affected.</p>	<p>1.92km within the SDNP</p>	<p>1.93km within the SDNP</p>	<p>2.28km within the SDNP</p>	<p>0.74km within the SDNP</p>	<p>1.97km within the SDNP</p>	<p>0km within the SDNP</p>

<sup>9</sup> This information is indicative not exhaustive. For details on how the preferred route will be selected, please see the Interim Scheme Assessment Report (Interim SAR).  
<sup>10</sup> Our analysis is based on the latest available information and results are subject to change, as the scheme continues to progress through our Project Control Framework.  
<sup>11</sup> In line with Highways England guidance, the traffic modelling presented in the brochure assumes that planned developments (such as the Lyminster Bypass and Worthing and Lancing scheme) proceed. However, given the uncertainty around the future of these schemes, a number of people have asked us how the traffic and economic assessments would change if this scheme did not proceed. The results of this analysis are set out in the Combined Modelling and Appraisal Report (ComMA) available on our website.  
<sup>12</sup> 2041 would be 15 years from the scheme opening date, which is currently planned for 2026. The 15-year timeframe is Highways England standard for scheme design performance assessments.  
<sup>13</sup> 'Do minimum' refers to a scenario where the A27 Arundel Bypass scheme would not go ahead, but this scenario does take into consideration other non-A27 Arundel Bypass improvements that have been considered as part of the traffic forecasts (e.g. Worthing and Lancing scheme and Lyminster Bypass).  
<sup>14</sup> See footnote 13 above.

<sup>15</sup> For information on start and end points for these journeys see map on page 18.  
<sup>16</sup> Impacted woodland includes all woodland areas identified by the National Forest Inventory. Loss of woodlands is assumed within the scheme footprint. Woodlands at risk is woodlands within 15 meters of the scheme footprint. See Arboriculture Report (an appendix to the EAR) for further details.  
<sup>17</sup> The special qualities include; diverse, inspirational landscapes and breath-taking views; a rich variety of wildlife and habitats including rare and internationally important species; tranquil and unspoilt places; an environment shaped by centuries of farming and embracing new enterprise, great opportunities for recreational activities and learning experiences, well-conserved historical features and a rich cultural heritage; and distinctive towns and villages and communities with real pride in their area. Further information can be found in the South Downs National Park Special Qualities Assessment which is available as an appendix in the EAR.



Figure 3: Annual average daily traffic (AADT)



<sup>18</sup> 'Do minimum' refers to a scenario where the A27 Arundel Bypass would not go ahead, but the scenario does take into consideration other non-A27 Arundel improvements that have been considered as part of the traffic forecasts (e.g. Worthing and Lancing and Lyminster Bypass)




# Environmental context

## Recognising the special nature of Arundel and the South Downs National Park

We are committed to minimising the environmental impact of our road network and protecting and enhancing the quality of the surrounding environment.

We recognise that the area around Arundel is very special in environmental terms and delivering any scheme here would present particular challenges.


When considering what improvements might be possible to the A27 in the area, we have carefully considered a range of significant environmental values and features, as set out in the  *Environmental Assessment Report (EAR)*<sup>19</sup>. Some examples of the environmental values and features of the area include:

### ■ South Downs National Park

The South Downs was designated a National Park in 2009 in recognition of its significant ecological, biological, cultural and scenic value.

We have a legal duty to have regard to the twin purposes of the National Park:

- To conserve and enhance the natural beauty, wildlife and cultural heritage of the National Park.
- To promote opportunities for the understanding and enjoyment of its special qualities.

Work has been done to assess the impact of the scheme on South Downs National Park special qualities. Please refer to the appendix in the  *Environmental Assessment Report (EAR)*.

### ■ Ancient woodland and veteran trees

Ancient woodland and veteran trees are protected by national planning policy. There is ancient woodland to both the north and south of the existing A27. The soils in these areas have been relatively undisturbed for centuries.

We recognise that ancient woodland is irreplaceable and plants and animals in these areas depend on the stable and rare conditions that an ancient woodland provides.

In the meantime, high-level provision has been made for environmental mitigation and compensation measures within our scheme cost estimates. The scale of any new woodland creation and potential suitable locations will progress further once a preferred option has been confirmed.

### ■ Protected and notable species and habitats

The area around Arundel provides an array of wildlife habitats that support rich and varied biodiversity features. Many rare and protected species and notable plant species are found in the area, including:

- Amphibians and reptile species
- Badgers
- Bats
- Birds (including breeding and wintering bird species)
- Hazel dormice
- Plant species
- Terrestrial invertebrate species
- Water voles
- Fish and aquatic invertebrates



Key label	Definition
South Downs National Park	National Parks are areas of relatively undeveloped and scenic landscape that are designated under the National Parks and Access to the Countryside Act 1949. The South Downs National Park was designated in 2009 covering 1600km <sup>2</sup> from Winchester (in the west) to Eastbourne (in the east).
Ancient woodland	Woodland that has existed since at least 1600 AD. It is given national level of protection under planning regulations.
Woodland	A habitat where trees are the dominant plant form.
Listed buildings (All Grades)	Listing marks a building's special architectural and historic interest and brings it under the consideration of the planning system, so it can be protected for future generations. There are three gradings in order of the level of interest: Grade I, Grade II* and Grade II.
Ancient/veteran trees	Trees that have been surveyed using a standard, industry-recognised approach (BS 5837).  Ancient: A tree that has passed beyond maturity and is old, or aged, in comparison with trees of the same species. Characterised by biological, cultural or aesthetic features of interest.  Veteran: A tree that has the biological or aesthetic characteristics of an ancient tree but is not ancient in years compared with others of the same species. A veteran tree may not necessarily be particularly old but, due to the rigours of life, may exhibit signs of ancientness.
Third party ancient/veteran/notable trees	Tree data that has been sourced through other means such as a desk study or provided by another organisation.  Ancient: as per description above.  Veteran: as per description above.  Notable: Trees generally recorded as such based upon their maturity, size (height and/or girth) and importance within the local environment. Notable trees do not necessarily have to be particularly old and nor do they have to exhibit any veteran characteristics.
Third party tree preservation order (TPO) trees	Arboricultural features that were present at the time the Order was made and identified on a plan are protected by a Tree Preservation Order (TPO) <sup>20</sup> . A TPO is afforded by a local planning authority under the Town and County Planning Act 1990. TPO data was provided by Arun District Council.  Trees: Individual trees that merit protection in their own right.
TPO tree groups/woodland	TPO definition as above.  Tree Groups: A group of trees that display similar arboricultural features either aerodynamically, visually or for containing similar biodiversity value. A group category is used where the individual category is not appropriate and the overall impact or quality of the group merits protection.  Woodland: A woodland may contain some trees that lack individual merit, all trees within a woodland are protected and made subject to the same provisions and exemptions. In addition, trees and saplings which grow naturally or are planted within the woodland area after the Order is made are also protected by the Order.
Conservation Area	Area designated by Local Planning Authority that is of special architectural or historic interest, the character and appearance of which it is desirable to preserve or enhance.
Flood Zones	Flood Zone 2: land having between a 1 in 100 and 1 in 1000 annual probability of river flooding; or between a 1 in 200 and 1 in 1000 annual probability of sea flooding.  Flood Zone 3: land having a 1 in 100 or greater annual probability of river flooding; or a 1 in 200 or greater annual probability of sea flooding.
Local Wildlife Sites	Area of land that has been identified and selected locally, using robust, scientifically-determined criteria and detailed ecological surveys for its nature conservation importance.
Noise Important Area	Noise Action Planning Important Areas for roads and railways provide a framework for the local management of the important areas.
Scheduled Monument	An historic building or site that is included in the Schedule of Monuments kept by the Secretary of State for Culture, Media and Sport.
Site of Special Scientific Interest	Providing statutory protection for the best examples of the UK's flora, fauna, or geological or physiographical features. These sites are also used to underpin other national and international nature conservation designations.

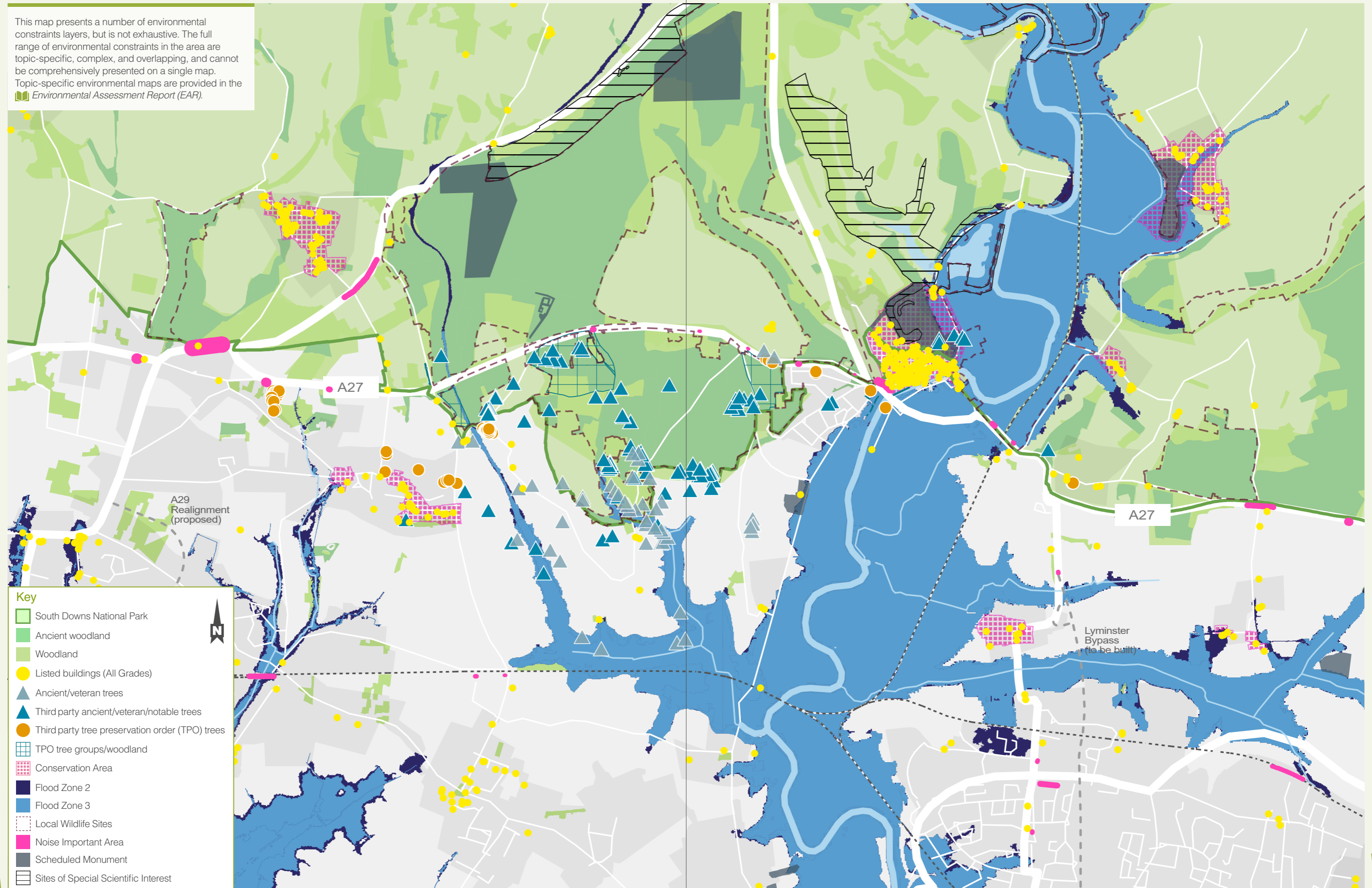
<sup>19</sup> Our analysis is based on the latest available information and results are subject to change.

<sup>20</sup> More information about tree preservation orders and trees in conservation areas can be found here <https://www.gov.uk/guidance/tree-preservation-orders-and-trees-in-conservation-areas>



**Figure 4: Environmental constraints**

This map presents a number of environmental constraints layers, but is not exhaustive. The full range of environmental constraints in the area are topic-specific, complex, and overlapping, and cannot be comprehensively presented on a single map. Topic-specific environmental maps are provided in the Environmental Assessment Report (EAR).



	Cyan (Option 1V5)	Beige (Option 1V9)	Crimson (Option 3V1)	Magenta (Option 4/5AV1)	Amber (Option 4/5AV2)	Grey (Option 5BV1)
<b>Air quality</b>	<p><b>Construction:</b> There is potential for temporary adverse impacts from dust emissions within 200 metres of the works. There would be no significant adverse effect.</p> <p><b>Operation:</b> There would be low risk of non-compliance with EU ambient air quality limit values. Reductions in nitrogen effect.</p>			<p>Best practice mitigation would be included in construction environmental management plans to address these impacts. There would be no significant adverse effects.</p> <p>dioxide concentrations would occur within the Storrington Air Quality Management Area. There would be no significant adverse effects.</p>		
<b>Cultural heritage<sup>21</sup></b>	<p><b>Construction:</b> Moderate adverse significance of effect for all heritage assets with exception of Lyminster Conservation Area which is neutral. Slight adverse significance of effect on below-ground archaeology.</p> <p><b>Operation:</b> Slight adverse significance of effect for all heritage assets.</p>		<p><b>Construction:</b> Large adverse effects on setting of Tortington Priory Scheduled Monument and one Grade II* listed building. Neutral effects in setting for the remainder of the heritage assets. Slight adverse effects on all heritage assets for below-ground archaeology including the course of the Roman road (MWS14385).</p> <p><b>Operation:</b> Large adverse effects on setting of Tortington Priory Scheduled Monument and one Grade II* listed building. Neutral effects on setting for all remaining heritage assets.</p>	<p><b>Construction:</b> Moderate adverse significance of effect on setting for Tortington Priory Scheduled Monument and one Grade II* listed building. Slight adverse significance of effect on setting for the remainder of the heritage assets. Moderate adverse significance of effect on the curtilages of six Grade II Listed Buildings. Slight adverse effects on below ground archaeology for all heritage assets.</p> <p><b>Operation:</b> Moderate adverse significance of effect for Tortington Priory Scheduled Monument and one Grade II* listed building. Slight adverse significance of effect for the remainder of the Grade II listed buildings.</p>	<p><b>Construction:</b> Moderate adverse significance of effect on setting for Tortington Priory Scheduled Monument and one Grade II* and two Grade II listed buildings. Neutral effects for the remainder of the heritage assets. Slight adverse effects on below-ground archaeology for all heritage assets.</p> <p><b>Operation:</b> Moderate adverse significance of effect for the Tortington Priory Scheduled Monument and one Grade II* and two Grade II listed buildings. Neutral for the remainder of the Grade II listed buildings.</p>	<p><b>Construction:</b> Moderate adverse significance of effect on setting for Tortington Priory Scheduled Monument and one Grade II* and eight Grade II listed buildings. Neutral effect on the remaining Grade II listed buildings. Slight adverse significance of effect on the setting for Walberton Village and Walberton Green Conservation Areas. Moderate adverse significance of effect on below-ground archaeology for all heritage assets.</p> <p><b>Operation:</b> Moderate adverse significance of effect for the Tortington Priory Scheduled Monument and one Grade II* and eight Grade II listed buildings. Neutral effect on the remaining Grade II listed buildings. Slight adverse significance of effect for Walberton Village and Walberton Green Conservation Areas.</p>
<b>Landscape</b> The following assessment refers to effects on Landscape Character Areas as defined by Natural England <sup>22</sup> . Operation refers to summer 2041, when the new road is expected to have been in place for 15 years.	<p><b>Construction:</b> Slight adverse effect on the following landscape character areas: Western Downs, Downland Arun Valley landscape area.</p> <p><b>Operation:</b> Slight adverse effect on; Central Downs and Downland Arun Valley landscape character areas. Neutral adverse effect on the following landscape character areas; Chichester to Yapton Coastal Plain, Western Downs, Angmering Park, Littlehampton to Worthing fringes local landscape area.</p>			<p>Central Downs, Angmering Park and Angmering Upper Coastal Plain. Neutral effect on Littlehampton to Worthing fringes local landscape area.</p> <p>Chichester to Yapton Coastal Plain, Western Downs, Angmering Park, Littlehampton to Worthing fringes local landscape area.</p>		
	<p><b>Construction:</b> Very large adverse effect on Arundel landscape character area. Large adverse effect on Lower Arun Valley landscape character area. Slight adverse effect on Fontwell Upper Coastal Plain landscape character area. Neutral on Chichester to Yapton Coastal Plain landscape character area.</p> <p><b>Operation:</b> Large adverse effect on Arundel landscape character area. Moderate adverse effect on Lower Arun Valley landscape character area. Neutral adverse effect on Fontwell Upper Coastal Plain landscape character area.</p>	<p><b>Construction:</b> Very large adverse effect on Lower Arun Valley landscape character area. Large adverse effect on Arundel and Fontwell Upper Coastal Plain landscape character area. Slight adverse effect on Chichester to Yapton Coastal Plain landscape character area.</p> <p><b>Operation:</b> Large adverse effect on Lower Arun Valley landscape character area. Moderate adverse effect on Arundel landscape character area. Moderate adverse effect on Fontwell Upper Coastal Plain landscape character area.</p>	<p><b>Construction:</b> Very large adverse effect on Lower Arun Valley landscape character area. Large adverse effect on Arundel landscape character area and Fontwell Upper Coastal Plain. Slight adverse effect on Chichester to Yapton Coastal Plain landscape character area.</p> <p><b>Operation:</b> Large adverse effect on Lower Arun Valley landscape character area. Moderate adverse effect on Arundel landscape character area. Large adverse effect on Fontwell Upper Coastal Plain landscape character area.</p>	<p><b>Construction:</b> Very large adverse effect on Lower Arun Valley landscape character area. Large adverse effect on Arundel and Fontwell Upper Coastal Plain landscape character area. Slight adverse effect on Chichester to Yapton Coastal Plain landscape character area.</p> <p><b>Operation:</b> Large adverse effect on Lower Arun Valley landscape character area. Moderate adverse effect on Arundel landscape character area. Moderate adverse effect on Fontwell Upper Coastal Plain landscape character area.</p>		
<b>Biodiversity</b> LWS: Local Wildlife Sites HPI: Habitat of Principal Importance. SSSI: Site of Special Scientific Interest	<p><b>Construction:</b> Large adverse effect for Binsted Wood Complex LWS, Rewell Wood Complex LWS, ancient woodland, deciduous woodland HPI. Moderate adverse effect for wood pasture and parkland HPI, coastal and floodplain grazing marsh HPI, bats, hazel dormice, terrestrial invertebrates, barn owl, protected and notable plants. Very large adverse effect for ancient and veteran trees.</p> <p><b>Operation:</b> Moderate adverse effects for bats. Slight beneficial effects for Arundel Park SSSI and Fairmile Bottom SSSI.</p> <p>All other construction and operation phase effects on biodiversity features would be slight adverse or neutral.</p>		<p><b>Construction:</b> Very large adverse effect for Binsted Wood Complex LWS, ancient woodland, deciduous woodland HPI, bats, terrestrial invertebrates. Large adverse effect for Rewell Wood Complex LWS, coastal and floodplain grazing marsh HPI, birds/breeding (woodland), hazel dormice, protected and notable plants. Moderate adverse effect on barn owl and water vole.</p> <p><b>Operation:</b> Very large adverse effects for bats. Slight beneficial effects for Arundel Park SSSI and Fairmile Bottom SSSI. Large adverse effect on Binsted Wood Complex LWS.</p> <p>All other construction and operation phase effects on biodiversity features would be slight adverse or neutral.</p>	<p><b>Construction:</b> Very large adverse effect on ancient and veteran trees. Large adverse effect for Binsted Wood Complex LWS, coastal and floodplain grazing marsh HPI, bats, protected and notable plants. Moderate adverse effect on ancient woodland, traditional orchard HPI, aquatic ecology, hazel dormice, barn owl and water vole.</p> <p><b>Operation:</b> Large adverse effects for bats. Moderate adverse effects on barn owls. Slight beneficial effects on Arundel Park SSSI and Fairmile Bottom SSSI.</p> <p>All other construction and operation phase effects on biodiversity features would be slight adverse or neutral.</p>	<p><b>Construction:</b> Very large adverse effect for Binsted Wood Complex LWS, ancient woodland, ancient and veteran trees, deciduous woodland HPI, wood pasture and parkland HPI, bats, terrestrial invertebrates. Large adverse effects on coastal and floodplain grazing marsh HPI, hazel dormice, protected and notable plants. Moderate adverse effect on aquatic ecology, water vole, barn owl and birds/breeding (woodland).</p> <p><b>Operation:</b> Very large adverse effects for bats and a large adverse effect on Binsted Wood Complex LWS. Moderate adverse effects on barn owls. Slight beneficial effects on Arundel Park SSSI and Fairmile Bottom SSSI.</p> <p>All other construction and operation phase effects on biodiversity features would be slight adverse or neutral.</p>	<p><b>Construction:</b> Very large adverse effect on ancient and veteran trees. Large adverse effects on coastal and floodplain grazing marsh HPI, and protected/notable plants. Moderate adverse effect on aquatic ecology, bats, hazel dormice, barn owl and water vole.</p> <p><b>Operation:</b> Moderate adverse effect on bats, barn owls. Slight beneficial effects for Arundel Park SSSI and Fairmile Bottom SSSI.</p> <p>All other construction and operation phase effects on biodiversity features would be slight adverse or neutral.</p>



<sup>21</sup> A list of the relevant remaining heritage assets can be found in the Environmental Assessment Report (EAR). A full list of all relevant listed buildings can be found in the EAR.

<sup>22</sup> Natural England's LCA definition <https://www.gov.uk/guidance/landscape-and-seascape-character-assessments>



	Cyan (Option 1V5)	Beige (Option 1V9)	Crimson (Option 3V1)	Magenta (Option 4/5AV1)	Amber (Option 4/5AV2)	Grey (Option 5BV1)
<b>Geology and soils</b>	<p><b>Construction:</b> Slight adverse effect of direct land take (best and most versatile agricultural land). Moderate to large adverse effect on soil resources affecting social, economic or environmental services.</p> <p><b>Construction:</b> Slight adverse effects for changes in ground level resulting in geological or geomorphological change – contaminated land. Potential effects associated with the exposure of contaminated land to adjacent site users is neutral.</p> <p><b>Operation:</b> Potential effects associated with the exposure of contaminated land to end-users and maintenance workers is neutral.</p>			<p><b>Construction:</b> Moderate adverse effect of direct land take (best and most versatile agricultural land). Moderate adverse effect on soil resources affecting social, economic or environmental services.</p> <p>this can include embankment creation or cuttings. Slight adverse effects for construction workers potentially exposed to</p>		
<b>Noise and vibration</b>	<p><b>Construction:</b> Approximately 427 properties within 100m with potential for significant effects.</p> <p><b>Operation:</b> Significant adverse effects on existing dwellings:</p> <ul style="list-style-type: none"> <li>East and south of Crossbush</li> <li>North of Ford Road roundabout</li> <li>On Fitzalan Road</li> <li>On Ford Road</li> </ul>	<p><b>Construction:</b> Approximately 429 properties within 100m with potential for significant effects.</p> <p><b>Operation:</b> Significant adverse effects on existing dwellings:</p> <ul style="list-style-type: none"> <li>East and south of Crossbush</li> <li>North of Ford Road roundabout</li> <li>On Fitzalan Road</li> <li>On Ford Road</li> <li>South of A27 (west of Ford Road roundabout)</li> </ul>	<p><b>Construction:</b> Approximately 24 properties within 100m with potential for significant effects.</p> <p><b>Operation:</b> Significant adverse effects on existing dwellings:</p> <ul style="list-style-type: none"> <li>East and south of Crossbush</li> <li>On Fitzalan Road</li> <li>On Ford Road</li> <li>In Tortington</li> <li>South of A27 (west of Ford Road roundabout)</li> </ul>	<p><b>Construction:</b> Approximately 70 properties within 100m with potential for significant effects.</p> <p><b>Operation:</b> Significant adverse effects on existing dwellings:</p> <ul style="list-style-type: none"> <li>East and south of Crossbush</li> <li>In Tortington and Binsted</li> <li>South of A27 (west of Ford Road roundabout)</li> </ul>	<p><b>Construction:</b> Approximately 76 properties within 100m with potential for significant effects.</p> <p><b>Operation:</b> Significant adverse effects on existing dwellings:</p> <ul style="list-style-type: none"> <li>East and south of Crossbush</li> <li>On Fitzalan Road</li> <li>In Tortington and Binsted</li> <li>South of A27 (west of Ford Road roundabout)</li> <li>Slindon</li> </ul>	<p><b>Construction:</b> Approximately 98 properties within 100m with potential for significant effects.</p> <p><b>Operation:</b> Significant adverse effects on existing dwellings:</p> <ul style="list-style-type: none"> <li>East and south of Crossbush</li> <li>On Fitzalan Road</li> <li>South of A27 (west of Ford Road roundabout)</li> <li>Tortington, Binsted and Walberton</li> </ul>
<b>Population and health</b>	<p><b>Construction:</b> Moderate adverse effects due to permanent requirement for demolitions or land from private assets for construction works. Adverse effects for temporary alteration of views in the landscape due to construction works (altering the views from the road for vehicle travellers). Neutral effects for temporary requirement of development land. Neutral effects for temporary impacts on health outcomes from construction dust. Negative effects on health outcomes from construction noise and access to active travel opportunities.</p> <p><b>Construction:</b> Slight adverse permanent effect due to requirement of community land or facilities (or access to) for construction purposes. Large adverse permanent effect due to requirement of agricultural land or access.</p> <p><b>Construction:</b> Moderate adverse permanent effect due to requirement of community land or facilities (or access to) for construction purposes. Large adverse permanent effect due to requirement of agricultural land or access.</p> <p><b>Construction:</b> Moderate adverse permanent effect due to requirement of community land or facilities (or access to) for construction purposes. Large adverse permanent effect due to requirement of agricultural land or access.</p>			<p>construction purposes. Moderate adverse effects for temporary changes to walking, cycling and horse riding journeys due to the views from the road for vehicle travellers). Neutral effects for temporary requirement of development land. Neutral effects for noise and access to active travel opportunities.</p> <p><b>Construction:</b> Neutral effect on community land or facilities (or access to) for construction purposes. Moderate adverse permanent effect due to requirement of agricultural land or access.</p> <p><b>Construction:</b> Slight adverse permanent effect due to requirement of community land or facilities (or access to) for construction purposes. Moderate adverse permanent effect due to requirement of agricultural land or access.</p> <p><b>Construction:</b> Neutral effect on community land or facilities (or access to) for construction purposes. Moderate adverse permanent effect due to requirement of agricultural land or access.</p>		
	<p><b>Operation:</b> Moderate adverse effects on permanent road and public right of way diversions or closures which result in outcomes resulting from air quality improvements and access to active travel opportunities. Negative impacts on health</p>			<p>changes in journey length or severance. Moderate adverse effects on permanent changes in amenity. Positive effects on health outcomes resulting from changes in noise levels.</p>		
	<p><b>Operation:</b> Beneficial effects to permanent alteration of views in the landscape due to the new bypass (altering the views from the road for vehicle travellers).</p>		<p>Neutral effects to permanent alteration of views in the landscape due to the new bypass (altering the views from the road for vehicle travellers).</p>	<p><b>Operation:</b> Adverse and beneficial effects to permanent alteration of views in the landscape due to the new bypass (altering the views from the road for vehicle travellers).</p>		
<b>Water environment</b>	<p><b>Construction:</b> Slight adverse temporary risk of pollution effect due to works within proximity to the River Arun and neutral effect to ordinary watercourses. Slight adverse temporary effect related to pond dewatering of Secondary A Aquifers<sup>23</sup>.</p> <p>Neutral effect to the physical character and content of water bodies (hydro morphological) and ecological quality of ordinary watercourses and flooding with appropriate measures adopted during construction.</p>		<p><b>Construction:</b> Slight adverse temporary risk of pollution effect due to works in close proximity to the River Arun and main rivers. Neutral effect to ordinary watercourses. Slight adverse temporary effect related to pond dewatering of Secondary A Aquifers.</p> <p>Neutral effect to the physical character and content of water bodies (hydro morphological) and ecological quality of ordinary watercourses and flooding with appropriate measures adopted during construction.</p>	<p>risk of pollution effect due to works in close proximity to the River Arun and main rivers. Neutral effect to ordinary watercourses.</p> <p>(hydro morphological) on the assumption that flood management measures can be successfully implemented. These flood management measures would be developed in consultation with the relevant statutory environmental bodies. Slight adverse permanent effect related to pond dewatering of Secondary A Aquifers.</p>		
	<p><b>Operation:</b> Neutral permanent effects for flooding, pollution, impacts to physical character and content of water bodies</p>			<p>(hydro morphological) on the assumption that flood management measures can be successfully implemented. These flood management measures would be developed in consultation with the relevant statutory environmental bodies. Slight adverse permanent effect related to pond dewatering of Secondary A Aquifers.</p>		

## How the options compare: environmental assessment

The table on pages 24 to 27 summarises results from the  *Environmental Assessment Report (EAR)* and reflects the latest available information at this stage of the scheme. For full details, including the extent of impacts outlined below, please refer to the  *EAR and Interim Scheme Assessment Report (Interim SAR)*.

The environmental assessments conducted to date assume that the route would be built on an embankment across the River Arun floodplain. The routes could alternatively be built with a viaduct. A decision on this will be taken once a preferred route is confirmed and more detailed design work is undertaken. These assessments also assume the A27 Worthing Lancing improvements progresses<sup>24</sup>.

### Environmental mitigation

We continuously strive to manage the potential environmental impacts of all of our schemes via an environmental management hierarchy: avoid, minimise, mitigate, offset and compensate. Opportunities for environmental enhancement will also form an important part of the management regime.

We intend to manage the potential adverse environmental impacts of this scheme through our design process (to avoid and minimise impacts) and by introducing specific impact mitigation measures during construction and operation. We recognise that some elements, such as ancient woodland, are irreplaceable and cannot be offset. We are also committed to monitoring and reviewing the effectiveness of all environmental management measures.

Specific mitigation and compensation measures which could be implemented include<sup>25</sup>:

- Green bridges and oversized structures (like culverts) to facilitate safer animal crossings of the A27
- Habitat creation to provide compensation for habitats affected by the scheme

- Planting of suitable vegetation to mitigate landscape impacts
- Flood management measures to avoid changes to flood characteristics
- Screening to mitigate impacts on cultural heritage setting

Provision has been made for environmental mitigation and compensation measures within our scheme cost estimates.

We will continue to engage with statutory environmental bodies and other key stakeholders to develop the full environmental mitigation strategy, once a preferred route is identified.

## Economic assessment

All our road schemes must demonstrate how the costs of the scheme compare to the benefits. This is known as the Benefit to Cost Ratio (BCR). As set out by the Department for Transport (DfT), benefits include journey time savings and safety improvements, while costs include the funding needed to develop the scheme, maintenance and construction fees and the purchase of any land required.

The final Value for Money assessment includes more than just the BCR and also takes account of all expected effects, risks and uncertainty. Taking into account all impacts, risk and uncertainty, no option significantly outperforms the other options in terms of value for money.

### Funding the scheme

Two of the six options are broadly deliverable within the current budget that has been allocated for the scheme through the Road Investment Strategy. We are still keen to receive feedback on all six options during the consultation since the cost ranges published within this consultation are early estimates based on work done to date and as such do not represent our final costs for the project. We will continue to develop our design in such a way that seeks to deliver the best possible value for money in line with the needs of the scheme.

## Costs and benefits

	Cyan (Option 1V5)	Beige (Option 1V9)	Crimson (Option 3V1)	Magenta (Option 4/5AV1)	Amber (Option 4/5AV2)	Grey (Option 5BV1)
<b>Cost range (million)</b>	£200 - £295m	£195 - £290m	£255 - £380m	£280 - £405m	£290 - £420m	£320 - £455m
<b>BCR<sup>26</sup></b>	1.7 - 2.5	1.6 - 2.3	1.7 - 2.4	1.5 - 2.2	1.6 - 2.3	1.5 - 2.1
<b>Value for Money</b>	Medium	Medium	Medium	Medium	Medium	Medium

### Compliance with National Networks National Policy Statement (NN NPS)

The A27 Arundel Bypass meets the criteria of being a Nationally Significant Infrastructure Project (NSIP) under the Planning Act 2008 and therefore must be authorised by the Secretary of State by way of a Development Consent Order (DCO). A DCO is a statutory instrument which will contain the necessary powers for us to construct, operate and maintain the scheme and replaces the need to obtain planning permission and a number of other consents. A DCO can also include a number of associated powers, including in relation to compulsory acquisition. More information is available in our planning policy summary on our website or from the Planning Inspectorate website:

<https://infrastructure.planninginspectorate.gov.uk>

Because the project is a NSIP, the primary policy document against which the Secretary of State must assess the scheme is the National Networks National Policy Statement (NN NPS). While the scheme aligns with many of the NN NPS policies, there are also policies which it may conflict with, including:

- **5.133: Heritage** – ‘Where the proposed development will lead to substantial harm to or total loss of significance of a designated heritage asset, the Secretary of State should refuse consent unless it can be demonstrated that the substantial harm or loss of significance is necessary in order to deliver substantial public benefits that outweigh that loss or harm.’

- **5.151: National Park** – ‘The Secretary of State should refuse development consent in these areas except in exceptional circumstances and where it can be demonstrated that it is in the public interest.’

- **5.154: National Park** – ‘The duty to have regard to the purposes of nationally designated areas also applies when considering applications for projects outside the boundaries of these areas which may have impacts within them. The aim should be to avoid compromising the purposes of designation...’

- **5.169: Minerals Safeguarding Area** – ‘Applicants should safeguard any mineral resources on the proposed site as far as possible.’

- **5.32: Ancient woodland** – Requires the Secretary of State to not grant development consent for any developments that would result in the loss or deterioration of irreplaceable habitats including Ancient woodland, unless the need for and benefits of development in that location clearly outweigh the loss.

Any scheme which conflicts with NN NPS policy carries a greater risk of being refused consent and therefore not being delivered. We will consider the NN NPS when selecting the preferred option, undertaking further detailed design and proceeding to prepare an application for consent.

<sup>24</sup> In line with Highways England process, the environmental assessments presented in this brochure assume that planned developments (such as the Lyminster Bypass and the Worthing and Lancing scheme) proceed. However, given the uncertainty around the future of the Worthing and Lancing scheme, we have received queries about how the assessment would change should the scheme not progress. The results of the environmental assessments excluding Worthing and Lancing are set out in the Environmental Sensitivity Testing Technical Note. This will be published by 13th September.

<sup>25</sup> For more information refer to Environmental Assessment Report (EAR).

<sup>26</sup> Combined Modelling and Appraisal Report (ComMA).



# Consultation feedback

## Your views are important

We would like to hear your views about the options presented. The consultation runs for eight weeks from **30 August to 11.59pm on 24 October 2019**. Responses received after this time may not be considered.

Details of how to submit your response to the consultation can be found on page 3 of this brochure.

## What happens after the public consultation?

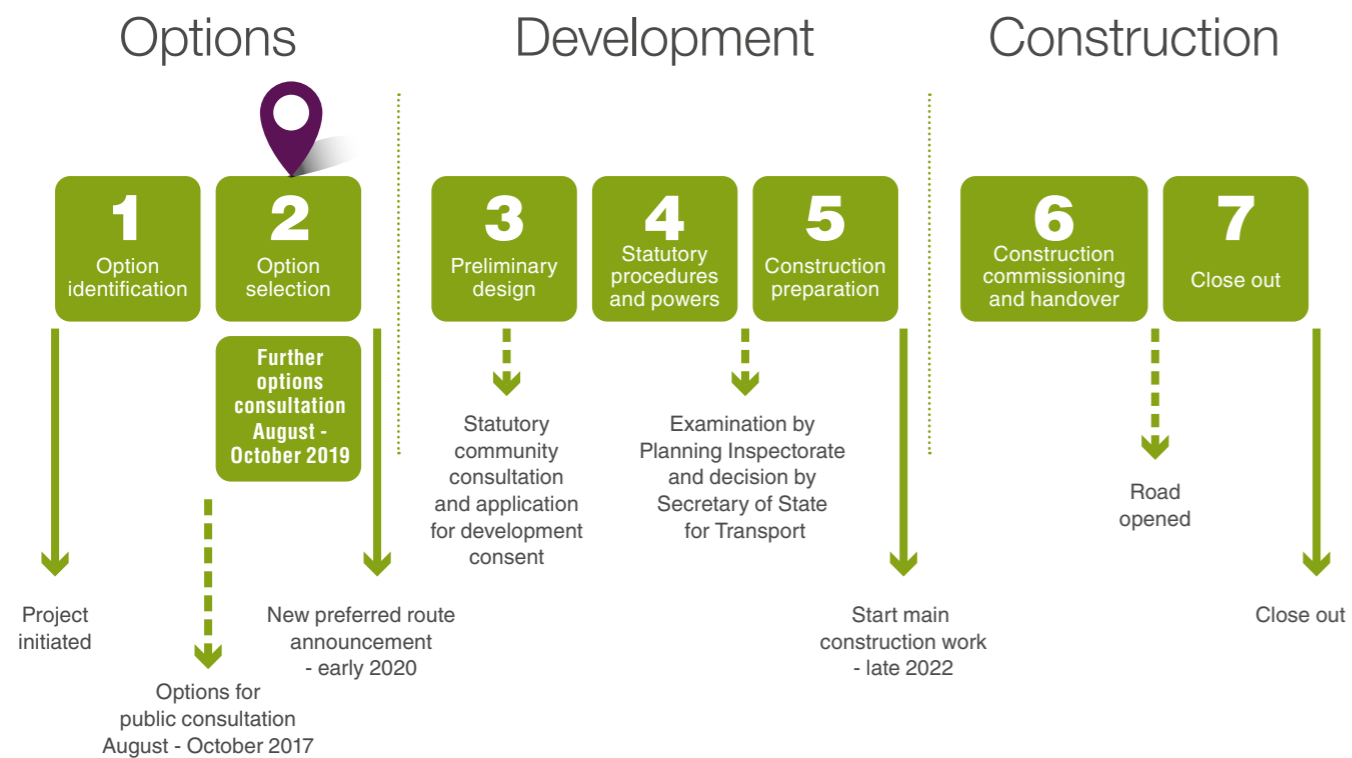
All responses and comments received during the public consultation will be considered and summarised in our Public Consultation Report, which will be published on our website. We will carefully consider the responses alongside several factors to determine our preferred route for the scheme.

## Another opportunity to have your say

Following a preferred route announcement, we will develop detailed proposals. This will include further surveys and investigations to allow us to design the scheme in more detail.

There will be a further opportunity to have your say on the design of this preferred route during further public consultation prior to any application for consent.

## 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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