

A14 Arundel Bypass Report on Further Consultation

Appendix D
Other written responses from
organisations (vol.)



Pacific House (Second Floor)
Hazelwick Avenue
Three Bridges
Crawley
RH10 1EX
01293 305965
coast2capital.org.uk

By e-mail

23 October 2019

A27 Arundel Bypass Further Consultation

Dear Highways England,

I am writing on behalf of Coast to Capital Local Enterprise Partnership in response to Highways England A27 Arundel Bypass Further Consultation. Coast to Capital is a unique business-led collaboration between the private, public and education sectors across a diverse area which includes East Surrey, Greater Brighton and West Sussex.

The consultation material summarises well the national and regional significance of the A27, "As the main route serving the south coast, the A27 corridor is crucial to the region's success. A population of more than 1 million people rely on the A27, and growth plans for the region mean this number is only set to increase."

The need to reduce congestion and improve movement of people and goods along the A27 from Brighton to Portsmouth is widely recognised, specifically in order to increase the local and regional economy, with widespread support for an appropriate intervention at Arundel. The limitations of the A27 are part of a wider picture of infrastructure challenges in the Coast to Capital area that restrict our economic growth compared to other parts of the South East. The national significance of this scheme is recognised in Government's own 2015-2020 Road Investment Strategy (RIS1).

We are pleased that Highways England continues to take a consultative approach to this important scheme. The need to support growth must also be carefully balanced with environmental and social impacts given the setting of existing and proposed routes. This is something that was firmly recognised in the previous consultation exercise and has, in part, led to these new proposals. We would encourage

Highways England to continue to listen to these concerns in this latest consultation phase.

We recognise local support by Arun District Council and West Sussex County Council, as well as other local groups including the Coastal West Sussex Partnership, for Magenta as the preferred route and we would add our own support to it, on balance of minimising social and environmental impact and providing value for money. In short, Cyan and Beige routes are considered to impact too heavily on Arundel itself as well as the South Downs National Park, while Crimson route would also have a heavy impact on the South Downs and a large swathe of Ancient Woodland. This would leave three remaining options – Amber, Magenta and Grey routes. Of these Magenta would be our preference for the reasons of balance stated above.

While Magenta route would help to reduce environmental impacts, we would urge Highway's England to invest in innovative ways to mitigate as far as possible the short and long term impact of the new road, on flora and fauna and local communities. This would include construction methods and materials but also design elements to aid the transit of people and wildlife in particular. Biodiversity gain should be an aspiration of the scheme where possible in terms of habitat creation, rather than simply the minimum degree of loss.

We consider that, given the timing of this scheme in relation to the growing understanding and acceptance of climate change risks, it is imperative to design in necessary measures now that will allow us to manage and reduce these risks for the future. We therefore encourage Highways England to think ahead creatively – with us, our partners and with other Government departments – as to future vehicle use of the A27 and other roads.

This would apply not only in terms of zero-emission modes of individual transport (i.e. private car and freight vehicles) but also raising the collective ambition to promote and encourage forms of mass transit. Much of the current congestion is exacerbated by local movements across and along stretches of the A27 by private car where no viable public transport or cycling alternative exist and where measures to enable such alternatives to be delivered in the future can be designed in now.

The relationship between road and rail networks, as part of future consideration of rail franchising models based on local commuter movement is also key. The consultation material acknowledges that rail take-up is low in the Arundel area, which should not simply be taken as a given but rather an opportunity to balance and reduce future use of the A27. Potential solutions to move longer vehicle journeys off the A27 and onto the West Coastway Rail Service may well lie in the ability to move more local rail journeys onto mass transmit road options, thereby enabling the railway to deliver more express journeys with a net reduction in demand on the road.

We look forward to Highways England's response to this latest stage of consultation and future design proposals.

Yours sincerely,



Chief Executive

Coastal West Sussex Partnership
Worthing Town Hall
Worthing
BN1 1HA

3rd October 2019

Dear Colleagues,

As the Chair of the CWS Partnership Board, I welcome the opportunity to be able to comment on the scheme proposals to improve the A27 at Arundel. This response has been sent on behalf of the CWS Partnership Board and it is requested that Highways England give due consideration to its contents before making its recommendations to the Secretary of State.

The Coastal West Sussex Economic Partnership brings together leaders from business, education and the public sector to work collectively on economic issues that affect the coastal strip. Geographically it covers the areas of Chichester, Adur, Arun and Worthing. Both the CWS Partnership (and its Executive Board) aim to add value and focus on the key "larger than local" issues that impact on our coastal economy whilst supporting business development and promoting sustainable economic growth across the area.

The A27 is the main arterial route along the West Sussex coast and as such, it is the most important transport connection between Portsmouth and Brighton so it is imperative that the A27 works effectively for the benefit of both the local, regional and national economy. In a recent survey carried out by the CWS Partnership, 90% of respondents said the A27 in West Sussex was important to their company

In considering the 6 options being proposed for the A27 at Arundel, 3 options would be favoured by the CWS Partnership Board:

- Magenta
- Amber
- Grey

These three options all provide a dualling and bypass solution that avoids dividing the town of Arundel and have less impact on the South Downs National Park. Of these three options then the Magenta option would be preferable as it has minimal impact on the SDNP (affecting just under 0.74 acres of the Park) and would be around £50Million less to deliver than the other preferred option that bypass the SDNP completely.

We would not support the Beige or Cyan route because of its impact on Arundel and the impact of local traffic trying to access the A27 from the Ford Road. The Crimson route would also not be supported because of its huge impact on the South Downs National Park.

In responding to the consultation, the CWS Partnership would also like to encourage Highways England to consider any potential modifications that would:

- Consider a full junction option for Ford Road because of the increasing levels of commercial and residential traffic that use this route from the urban centres of Littlehampton and Bognor Regis whilst also future proofing the road network for future development in Ford.
- Create appropriate cycle routes that promote commuter opportunities but that also support more leisure cycling and open routes along the River Arun to connect the coastline to Arundel and the South Downs National Park.

The dualling options being proposed for the A27 at Arundel are very welcome but we also recognise that there are other obvious bottle necks along the A27 in West Sussex. The CWS Partnership would like to encourage Highways England to take a more holistic and joined up approach to deliver improvements along the whole stretch of the A27 in West Sussex, particularly in Worthing, Lancing and Chichester as collectively, this would have a much greater and more positive impact on the regional economy and yield greater economic return in the longer term.

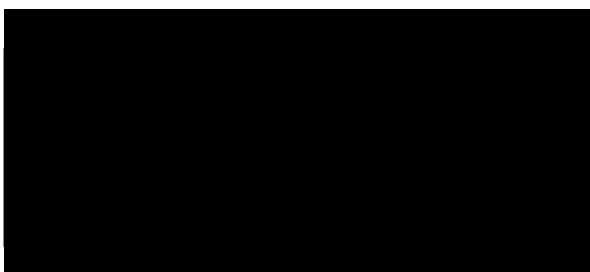
Any infrastructure investment into this area needs to deliver:

- Improved journey times - East to West along the whole stretch of the A27 from Brighton to Portsmouth
- Improved journey time reliability and resilience against unplanned incidents
- Removal of choke points and stop/start traffic need to use longer routes with the consequent poor levels of air quality along the road and in affected towns and villages such as Storrington.
- Improve the attractiveness of the area as a place to do business by improving connectivity to/from the West Sussex coast
- Better access for visitors to both the coast and the South Downs National Park
- A broader recruitment pool for businesses located in the area by improving connectivity to/from urban areas
- Improvement in the journey times and access for businesses and residents to the north and south of the A27
- Complement improvements to other transport investment that is already being made; eg A284 Lyminster bypass and the A259 corridor improvements at Littlehampton, because unlike other areas there are few acceptable alternative routes for users to use at times of congestion on the A27.

If the competitiveness of the West Sussex coastal economy was to improve and be brought into line with the regional average, the area could generate significant economic benefits for the national economy. If the Gross Value Added (GVA) of the coast was to grow at the same rate as that of the south east, the coastal economy would have generated an additional £886M between 2012-2016.

Improving the infrastructure along the coast is probably the number one issue for businesses based in the coastal area so we look forward to hearing the announcement of the preferred route in early 2020.

Best wishes,



Chair, CWS Economic Partnership & Client Director of Inpress Plastics Ltd.



Campaign to Protect
Rural England, Sussex Branch CIO
Brownings Farm, Blackboys,
East Sussex, TN22 5HG
Tel 01825 890975
e-mail info@cpresussex.org.uk
www.cpresussex.org.uk

England (A27 Arundel Bypass Consultation)

By email: A27ArundelBypass@highwaysengland.co.uk

22nd October 2019

Dear Highways England

Arundel A27 Bypass Consultation 2019

This is the formal response of the Sussex branch of the Campaign to Protect Rural England (CPRE Sussex) to the above consultation. CPRE Sussex works to promote the beauty, tranquillity and diversity of the Sussex countryside by encouraging the sustainable use of land and other natural resources in town and country. We encourage appropriate and sustainable land use, farming, woodland and biodiversity policies and practice to improve the well-being of rural communities.

We have completed your online survey; however, we found the questions very restrictive so have decided to send a letter in addition to the survey in order to ensure that our position is clear.

4. If all options are brought into an affordable range*, which option would you prefer? (Please tick one option)

- Beige (Option 1V9)

We would like to highlight that whilst we have selected the 'Beige' option, this is due to the restricted options available. Our preference would be the consideration of the Arundel Alternative, a wide single carriageway, 40 mph road. Whilst this would follow a similar route to the Beige and Cyan options, we cannot completely support these as they involve permanent loss of irreplaceable habitats.

5. The scheme budget is currently £100-250m. Affordability is an ongoing concern and if only Cyan and Beige (Options 1V5 and 1V9) remain affordable, which option(s) would you support? (Please tick all that apply)

- Beige (Option 1V9)

We would like to highlight that whilst we have selected the 'Beige' option, this is due to the restricted options available. Our preference would be the consideration of the Arundel Alternative, a wide single carriageway, 40 mph road. Whilst this would follow a similar route to the Beige and Cyan options, we cannot completely support these as they involve permanent loss of irreplaceable habitats.

6. To what extent do you agree or disagree that there is a need to improve the A27 around Arundel?

Agree

We believe that a new bypass on its own will not be a 'silver bullet' and that any road investment programme should be part of wider measures to tackle congestion such as a move away from car-dependent new development and investment in infrastructure for sustainable travel, particularly the rail network. It is clear there are existing issues regarding access, particularly for non-motorised users and that the current road already severs irreplaceable habitat and causes light, noise and vibration pollution.

7. How concerned are you about the following issues in relation to the existing A27 around Arundel? (Please select one option in each row)

We have selected 'very concerned' in relation to all the issues. It is disappointing that the climate emergency and the need to reduce carbon emissions is not included as an issue.

8. Please add any other comments that you may have regarding existing issues:

[Summary of comments above submitted]

9. Please indicate the extent to which you agree or disagree with the following statements when considering your preferred option(s) for improving the A27 around Arundel: (Please select one option in each row)

We do not agree that any improvements should prioritise through traffic.

10. Please indicate which option would... (Please select one option in each row)

We have not agreed with any of your statements as our preference would be the consideration of the Arundel Alternative.

11. Taking into consideration what you know about the proposed options, which option would you prefer if all options were brought into an affordable range*? Please select your preferred options, ranked by first, second and third preference: (If you have only one or two preferred options, please select accordingly)

This question is very misleading as we cannot understand how the more expensive options could be brought into an 'affordable range' whilst still ensuring compliance with our current legal and policy frameworks? Surely 'value engineering and contractual efficiencies' are a given on any scheme? If anything, we anticipate that costs will be higher than the estimations provided. For example, given the incredibly sensitive nature of the landscape and potential impacts in relation to enabling maximum permeability for species and landscape function, in the event that a scheme does proceed with a route across the Arun Valley, the only suitable approach must be a viaduct.

We would like to highlight that whilst we have selected the 'Beige' option, this is due to the restricted options available. Our preference would be the consideration of the Arundel Alternative, a wide single carriageway, 40 mph road. Whilst this would follow a similar route to the Beige and Cyan options, we cannot completely support these as they involve permanent loss of irreplaceable habitats.

12. Taking into consideration what you know about the proposed options, please select your least preferred (or last choice) option if all options were brought into an affordable range:

This question is very misleading as we cannot understand how the more expensive options could be brought into an 'affordable range' whilst still ensuring compliance with our current legal and policy frameworks? Surely '*value engineering and contractual efficiencies*' are a given on any scheme? If anything, we anticipate that costs will be higher than the estimations provided.

We would like to highlight that whilst we have selected the 'crimson' option, this is due to the restricted options available. In our view, all six options currently have unacceptable impacts on biodiversity and people. We have selected the Crimson route, as it will result in the destruction of over 20 hectares of ancient woodland, however we question how useful this question is when all the options are damaging.

13. Please add any other comments about the proposed options:

Our national commitment, in the light of the 'Climate Emergency,' is to reach 'net zero' Greenhouse gas emissions by 2050. If we are serious about this commitment as a nation, then we should not be investing huge sums of money in projects which will increase car use and carbon emissions and reduce the amount of carbon-absorbing vegetation.

We believe that a new bypass on its own will not be a 'silver bullet' and that any road investment programme should be part of wider measures to tackle congestion such as a move away from car-dependant new development and investment in infrastructure for sustainable travel, particularly the rail network. In the consultation brochure, an increase in the use of sustainable transport is dismissed as unlikely to solve the problems of queuing and congestion at Arundel. All reasonable options to minimise demand, widen travel choices and improve efficiency, should have been considered before moving to the final option of building another bypass.

We believe that all the bypass options presented as part of this consultation would damage the surrounding landscape, including the South Downs National Park and its special qualities, mature woodland, the Arun floodplain, tranquillity and dark night skies, which are highly valued and irreplaceable. Table 8-9 within Chapter 8 of the Environmental Assessment Report (EAR) clearly shows the devastating extent of the habitat severance and loss as a result of the proposed schemes. The iconic view of Arundel and Arundel Castle would be heavily impacted. This some of the best Sussex has to offer in terms of beauty and heritage – our national treasures. We would like Highways England to consider the 'Arundel Alternative' put forwards by local people; a shorter, 40mph wide single carriageway which addresses pinch points and improves flow. This appears to be far less damaging when compared to the huge environmental impacts of the schemes currently in the consultation.

As a countryside and landscapes charity, we fully support the South Downs National Park Authority in their response to the consultation, namely:

- That all the route options as currently presented, including the route outside the National Park (Grey Route 5BV1), impact negatively on the National Park and its setting. To varying degrees all would cause significant harm to the biodiversity, cultural heritage, access, recreation potential and landscape character and visual quality of the South Downs National Park.
- That Highways England should be urged to address, as a priority, the shared concerns raised in the Single Voice letter sent by the DEFRA family (Forestry Commission, Natural England, Environment Agency and the SDNPA).

- That in the absence of both a detailed scheme plan, and a committed and funded mitigation and compensation package, it is not currently possible to rank the options in terms of their impacts upon the National Park.

14. How did you find out about the consultation? (Please tick all that apply)

Highways England website or email

15. Have you found the consultation materials useful in answering your questions about the A27 around Arundel?

To a certain extent

16. Have you visited one of our public consultation events, or do you intend to?

Yes, have visited

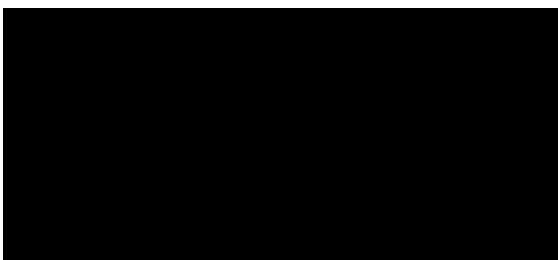
17. If you have visited an exhibition, how useful did you find it in terms of addressing your questions about the options for improving the A27 around Arundel? (Please tick one option)

Not useful

18. Do you have any other comments about the consultation process or materials?

We are concerned about inaccuracies in the information presented as part of this consultation. Given the restrictive nature of the consultation questions we do not feel that respondents are given adequate opportunity to explain their views. For example, respondents are required to highlight one option as unacceptable in question 12 when we find that all options proposed are unacceptable. We would like further consideration to be given to the scheme suggested as the 'Arundel Alternative' which proposes significantly less land take and severance. Leaving out the option of the Arundel Alternative has artificially restricted the consultation process.

Yours sincerely,



Director, CPRE Sussex

A27 Arundel Bypass
Highways England
Bridge House
1 Walnut Tree Close
Guildford
Surrey GU1 4LZ

By email: A27ArundelBypass@highwaysengland.co.uk



24 October 2019

Dear Sirs

A27 Arundel By-Pass Further Consultation

We act for the Rontec Group of Companies who together are the freehold owners and operators of the petrol filling station known as Crossbush Service Station, Lyminster Road, Crossbush, West Sussex, BN17 7QQ. ("the Crossbush PFS")

We write with reference to your further consultation on the proposed A27 Arundel by-pass and the impact of the proposed scheme on the Crossbush PFS. Each of the options of the scheme you are proposing involve the construction of a new dual two-lane carriageway bypass located to the south of the existing A27. At the Crossbush Junction/Roundabout at which the Crossbush PFS is located, each of the proposed options pass immediately to the north of the Crossbush PFS and includes the same revised junction layout which replaces the existing Crossbush roundabout. The scheme footprint is illustrated in the layout drawings contained in Appendix D of the Interim Scheme Assessment Report. We attach a copy for ease of reference.

A representative of our client attended the additional consultation forum and has been in direct contact with you.

We understand that the proximity of the westbound on-slip to the service area means that the existing embankment supporting the A284 would need to be widened. Retaining walls would be needed to avoid permanent land take within the Crossbush PFS. The proposed construction methods are not known at this stage so it is not possible for you to confirm whether temporary land take would be required during construction. We are concerned to ensure that our client's land is not required for the retaining walls and that our client is consulted fully during the process to ensure that interference with the Crossbush PFS is minimised with no interference to our its business.

More significantly, we are concerned that the alignment of the new junction layout will have a detrimental impact to the access and egress to the Crossbush PFS.

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The current layout of the road has all traffic travelling on the A27 in both directions via the Crossbush roundabout. Traffic from both directions also accesses the Crossbush PFS by way of the Crossbush roundabout. The Crossbush Service Station is well-signed and is also visible from the Crossbush roundabout. The new junction layout involves the construction of a dual carriageway that takes direct traffic away from the site in both directions without the need to stop. Although slip-roads are provided in both directions, access would be via a new roundabout, and in the case of traffic travelling east via two roundabouts and a connecting bridge. The majority of traffic flow on the new section of the dual carriageway will no longer see the Crossbush PFS.

In our view, your proposal may have a significant impact on the Crossbush PFS for the following reasons:

- it will take traffic away from the site;
- it will make ingress and egress to the site from both directions more convoluted;
- the proposed changes to ingress and egress will:
 - (i) have a negative impact on the commercial viability of the running of the Crossbush PFS by making it less accessible to motorists; and
 - (ii) have a detrimental impact on the health and safety of motorists by making access to the Crossbush PFS more complex and so deterring motorists from stopping.

Our client is grateful for the opportunity to have started a dialogue with you and wishes to continue that dialogue in a constructive and positive manner in order to address their concerns. In the meantime, please treat this letter as our client's formal objection to your proposal insofar as it impacts on the ingress and egress to the Crossbush PFS.

Yours faithfully,



██████████
Highways England
Bridge House 1 Walnut Tree Close
Guildford
Surrey
GU1 4LZ

Our ref: HA/2017/119374/05-L01
Your ref: ENVPAC/1/SSD/00025
Date: 16 October 2019

Dear ██████████

A27 ARUNDEL BYPASS - FURTHER PUBLIC CONSULTATION

Thank you for inviting the Environment Agency to provide comments on your further public consultation on the six proposed options for the A27 Arundel Bypass scheme.

We are providing this advice under agreement ENVPAC/1/SSD/00025.

Our response is at a high level based on the nature of the consultation at this stage. We would also draw your attention to the Defra family "Single Voice" letter we sent to you along with the Forestry Commission, Natural England and the South Downs National Park Authority which sets out our shared issues and requirements for the A27 Arundel Bypass scheme.

We look forward to continue working with you and your consultants as the scheme progresses to ensure that decisions with regard to the route and its design fully reflect the sensitive environment in which the proposals sit.

Environment Agency Advice

All of the proposed options pose significant environmental risks which will need to be fully investigated, assessed and addressed when deciding on the preferred route and as the design of the scheme progresses.

We fully encourage Highways England to consider the weight of opportunities and risks for flood risk and the environment when deciding on a preferred option, and when further evaluating the costs versus benefits of that route.

Below we have provided advice on the main environmental constraints, within our remit, that you should be aware of. Many of these have already been identified in the Environmental Assessment Report supporting the consultation. A number of the

Environment Agency
Portfield Depot Oving Road, Chichester, West Sussex, PO20 2AG.
Customer services line: 03708 506 506
www.gov.uk/environment-agency

Cont/d..

constraints are relevant for each of the options but where necessary we have drawn out the distinctions between options. We hope that this assists you in determining a preferred route and also serves as a basis for further discussions with us on the issues any detailed scheme will need to address.

Flood Risk

All six options include areas that are located within the floodplain of the River Arun. These are designated as Flood Zone 3 on our Flood Map for Planning, which indicates land with a 1 in 200 year probability of flooding from the sea, or 1 in 100 year probability of flooding from fluvial sources. This is defined as a high probability of flooding in the Planning Practice Guidance.

Whilst the location of the River Arun crossing, and the distance across the flood plain, differs between the six options they would all require the submission of a Flood Risk Assessment that demonstrates the scheme would be safe without increasing flood risk elsewhere over the lifetime of the infrastructure. This is in accordance with paragraph 163 of the National Planning Policy Framework (NPPF) and paragraphs 5.93-4 of the National Policy Statement for National Networks (NPSNN).

The consultation material states that for each option there will be a neutral impact on flood risk as it will be mitigated for through the design. Whilst in order to secure development consent this would be the case we recommend that for each option you consider how the likely requirements for ensuring flood risk isn't increased elsewhere could be managed along with the associated costs for these.

We understand that modelling is being undertaken to consider these requirements for fluvial scenarios. However, we are still concerned that the impact the proposed options may have on tidal flood risk has not yet been properly considered. As highlighted the options fall within an area at risk from fluvial and tidal flooding and as such both must be assessed as part of the Flood Risk Assessment. We are surprised to see that initial modelling suggests the online options require significantly more flood storage compensation given that they cross a much narrower section of the floodplain. This is something that we would expect to discuss in more detail once the detailed modelling is ready for review.

Sequential Test and Approach

Any development within Flood Zones 3 and 2 (1 in 1000 year probability of flooding) will need to demonstrate that there are no other available sites appropriate for the development at a lower risk of flooding (known as the 'Sequential Test'). Considering the scheme has to pass over at least one main river in order to connect the two dual carriage way parts of the A27, it is unlikely that an alternative location completely within Flood Zone 1 for any proposed bypass could be identified.

However, we would recommend that this assessment is undertaken by Highways England through their Flood Risk Assessment. It would be consistent with the sequential approach to seek a preferred option and design that avoids locating as much infrastructure in Flood Zone 3 as is possible.

Functional floodplain

The Arun Strategic Flood Risk Assessment defines Flood Zone 3b, or functional floodplain, as land with a 1 in 20 year chance of flooding. Planning policy restricts the types of development that should be permitted within the functional floodplain. In

order for any highway to be located in these areas, it should be defined as 'essential infrastructure' by the planning authority.

Although all the options may involve crossing areas of functional floodplain, at this stage it is not clear to what extent they would require built footprint within the functional floodplain.

The NPPF and associated Practice Guidance makes it clear that essential infrastructure located within Flood Zone 3b must:

- remain operational and safe for users in times of flood;
- result in no net loss of floodplain storage;
- not impede water flows and not increase flood risk elsewhere.

We therefore recommend that you consider the extent of Flood Zone 3b that would be impacted by the options in making a decision on a preferred route and design, including what may be required in order to ensure they meet the above requirements.

Increasing flood risk elsewhere

In accordance with the NPPF and NPSNN it would need to be demonstrated that the scheme, both during construction and operation, will not increase flood risk elsewhere.

An increase in flood risk could be caused by structures in the floodplain resulting in the loss of fluvial floodplain storage, or the impedance of tidal flood paths, resulting in increases in flood risk to properties, infrastructure or land elsewhere.

Any final design and Flood Risk Assessment will need take into account the uncertainties regarding flood risk over the lifetime of the infrastructure. This includes the impact of climate change and sea level rise on tidal and fluvial flood risks, as well as the standard of flood risk infrastructure on the Arun over the next 100 years. Therefore, we recommend that you consider the impacts of climate change and the implications of an undefended scenario in considering the options, including any high level assessment on flood risks.

As you have highlighted the climate change allowances are due to be updated as a result of the new UK Climate Projections 2018. We would expect that these allowances, when published, are used to inform further assessments following the preferred route announcement. More information on our guidance for climate change allowances in planning can be found here: <https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances> which will be updated when the new allowances are available.

Modelling

Detailed flood modelling has been submitted to, and accepted by, the Environment Agency regarding the baseline scenario. Further modelling of how both fluvial and tidal flood risk is affected by the proposed development designs is still required.

We will continue to work with you and your consultants to ensure that the flood modelling for the scheme is robust. We recommend this is a matter that is fully satisfied prior to any submission. This will avoid delays in the development consent process.

Opportunities

Paragraph 5.103 of the NPSNN makes clear that Highways England should be identifying opportunities to provide flood risk benefits through the scheme. Whilst the scheme is at a high level stage, and requires much further assessment and design, it is clear that there is potential for such an option to be considered further. Such an approach could also address several of the above planning requirements if an improvement in flood risk management could be achieved. When deliberating on the options, we encourage Highways England to keep in mind not just the implications of the above requirements for assessing and mitigating flood risk, but also the potential for improvements to flood risk management through delivery of the scheme. This should ensure that potential opportunities are not missed out.

Biodiversity

As identified in the environmental appraisal of the consultation package there are major adverse risks to nature conservation from all six options presented.

All six route proposals involve crossing the River Arun and associated floodplain with four offline routes requiring a new span across the River Arun and the two broadly online routes requiring an increased footprint upon the current crossing. Three options, 4/5AV1, 4/5 AV2 and 5 BV1 also cross the Tortington Rife and Binsted Rife which are main rivers.

As well as being priority habitats in their own right, watercourses also serve as ecological corridors that support the movement of species and resilience of populations to climate change.

The floodplain of the Arun contains an extensive network of watercourses, coastal and floodplain grazing marsh, and other wetland habitat that will also be of significant ecological value. Water voles, a protected species under Schedule 5 of the Wildlife and Countryside Act 1981, are present along the Arun, whilst a significant run of Sea Trout uses the main river for migration and ditches within the floodplain provide vital habitat for the protected European eel. Any works to the channels, e.g. infilling, shortening or redirecting, would have implications for ecology, drainage and sediment movement into the river.

The construction of the highway poses a risk to these habitats and species, including direct loss and fragmentation of habitat, interruptions to ecological corridors/ migratory routes, disturbance to species, water pollution, etc. This and the loss of ancient woodland, are likely to pose the most significant risks for biodiversity.

In line with paragraph 175 of the NPPF and paragraph 5.25 of the NPSNN, any detailed scheme will need to demonstrate how impacts to biodiversity have been avoided, mitigated or, as a last resort, compensated for. The design of the scheme and demonstration of how it is in accordance with planning policy and legislation on protecting biodiversity, will need to be based on adequate surveys and assessment of the risks to habitats and species.

Options 3V1, 4/5AV1, 4/5AV2 and 5BV1, which all run to the south and comprise the longest stretches of new highway and the greatest extent through the Arun floodplain will require the most work in terms of mitigation. The scale of impact of all these options will vary dependant on the decision to take forward either an embankment or viaduct crossing of the floodplain.

Option 3V1 whilst being the shorter route has the clear constraint of a large adverse impact upon the ancient woodland at Binsted and its associated species including bats.

Options 4/5AV1 and 4/5AV2 will also impact upon the woodland to a lesser extent and create a barrier to the free movement of a number of species. They will also require crossings of the Tortington and Binsted Rifes.

Option 5BV1 avoids many of the significant blocks of protected woodland, however, being the longest route it entails the largest land take and will require crossings of both the Tortington and Binsted Rifes. We would wish to see significant numbers of appropriately designed green bridges and underpasses for the exclusive use of wildlife to ensure the impacts of habitat severance are reduced.

We would recommend that as the scheme progresses consideration should be given to Non-native Invasive Species both in terms of bringing species in to the Arun valley or disturbing and distributing those already in existence.

We recognise that minimised environmental impacts, and an improved local environment are one of the project objectives. With this in mind, and considering the scale of investment and works involved, including the access to Designated funds, we would expect the project to be resulting in a substantial net benefit to biodiversity overall. There are likely to be opportunities for substantial habitat creation and improvement, and we look forward to discussing how such improvements could be secured alongside Natural England and other relevant stakeholders.

Groundwater Protection

Contaminated Land – Landfills, previous use

Construction works for new highways can pose a risk to groundwater resources by mobilising any contaminants in the ground and creating new pathways for pollutants. The Environmental Assessment Report - August 2019 identified a number of landfills within the study area which would need to be considered further as the Scheme progresses. As an example there is a historic landfill site at the north east corner of Ford Road roundabout, located over the Spetisbury Chalk designated as a Principal Aquifer and a significant groundwater resource that must be protected. This could impact options 1V5 and 1V9.

The presence of historic landfills and sensitive groundwater resources should be considered through the decision making process to confirm a preferred route. Once the preferred route is selected a detailed desk based risk assessment should be made at an early stage to identify all active and historic landfills and other sources of contaminated land associated with current and past land uses.

In addition natural and non-natural cavities in the chalk may have been infilled and could present a risk of contaminants being mobilised by the development. The existing highway land itself could potentially be affected by contamination. These areas may need further risk assessment, potentially with an intrusive site investigation targeted at known areas of potential contaminated land.

We advise that consideration is given to the level of remediation required and the impact this may have on the cost benefit ratios for individual options.

Solution Features

We support the consideration in the Environmental Assessment Report of the potential for the presence of dissolution features where the scheme is underlain by chalk. Solution features could pose risks in terms of stability to the development and also create preferential pathways for chemical contamination of the underlying aquifer.

Solution features in the Chalk are known to be present in the vicinity of Binsted and Binsted Woods, which could affect Options 4/5AV1, 4/5AV2 and 5BV1. Due to the nature of the Chalk in this area, other previously unidentified solution features may be present and should be considered as part of any site investigation.

Piling

Piling and investigation boreholes using penetrative methods can result in risks to potable supplies from, for example, pollution/turbidity, risk of mobilising contamination, drilling through different aquifers and creating preferential pathways. If piling is to be carried out in areas of contaminated land or where contaminated land is suspected then controls will be required to ensure the protection of groundwater. In some locations certain piling techniques may not be appropriate.

Dewatering

Abstraction for dewatering purposes can have unacceptable impacts on environmental features supported by groundwater, for example, wetlands, watercourses, ponds or may derogate existing protected licensed water supplies, or lead to deterioration in groundwater quality. All of the routes proposed are likely to have areas where dewatering is required and therefore needs to be considered.

Drainage

Highways pose a risk to the water environment through the introduction of new and/or increased discharges from highway runoff to watercourses or groundwater. Highway runoff can contain metals, hydrocarbons and sediment, which without adequate pollution prevention measures, can result in pollution of the water environment.

In line with paragraph 170 of the NPPF, which states that development must not result in unacceptable levels of water pollution, the drainage systems for the bypass will need to be designed to fully address pollution risks, including maintenance. This should include identifying opportunities for improving existing systems on the road network.

We recommend prioritising vegetated drainage systems in early thinking about drainage solutions, maximising the opportunities for multiple benefits for surface water management, pollution prevention, biodiversity, and landscape.

Environmental permits

Each of the six options are likely to require environmental permits from us under the Environmental Permitting regulations. We encourage early permitting discussions with us, once a preferred option is chosen and detailed design is developed, on the likely requirements for these.

Final Comments

I trust that the above comments are useful as you progress from the Options appraisal to further stages of the scheme for the A27 Arundel Bypass.

We would like to take this opportunity to reiterate our wish that as an overarching principle any option for the bypass should be considered in an integrated way at a landscape scale to ensure that the complex and interconnected ecosystem that is set within wider hydrological catchment are fully understood and reflected in design choices.

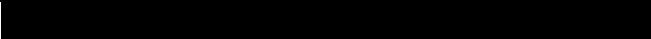
Key principles that we would wish to see taken forward following the preferred route announcement include the further consideration of a viaduct; the use of multiple quality green bridges in optimal locations to address concerns of habitat severance; and opportunities for biodiversity net gain are fully assessed.

We look forward to working with you and your consultants as you further develop this scheme. Please do not hesitate to contact me directly if you require further advice on any of the above issues.

Yours sincerely


Planning Specialist

Direct dial 

Direct e-mail 

South East & London

Bucks Horn Oak

Farnham

GU10 4LS

Tel: 0300 067 4420

Southeast&london@forestrycommission.gov.uk

**Highways England
Bridge House
1 Walnut Tree Close
Guildford
Surrey
GU1 4LZ**

31st October 2019

Dear Sirs

Forestry Commission advice re the A27 Arundel Bypass Consultation

Thank you for seeking the Forestry Commission's advice about the impacts of the options put forward in the latest consultation for an Arundel bypass.

Our advice here builds on that provided in the joint letter from the Environment Agency, Natural England, the South Downs National Park and ourselves on the 13th August 2019. In this we collectively stressed the implications of 'severance' within the wider landscape in respect of its' ecology, landscape and cultural heritage.

In that context we would highlight the following principles which we encourage you to consider:

- 1. Protection of Ancient Woodland and veteran trees:** As noted in the consultation document government policy highlights the irreplaceable nature of these national assets and hence our standing advice is to avoid loss of ancient woodland and buffer it from the impacts of new development to prevent encroachment and degradation. Further information highlighting the implications of development on ancient woodland can be found in Appendix 1.
- 2. Preservation of other woodland and existing trees:** Other existing woodland can provide a range of eco-system services and should be protected

and included in the design with appropriate measures to ensure their management in perpetuity.

3. Inclusion of new trees and woodland in your design:

- Seek to enhance ecological networks at a landscape scale by connecting and buffering existing woodland (and other priority habitats);
- Consider the species and provenance of new trees and woodland to maintain the ecological value of ancient woodland but also to establish a more resilient 'treescape' which can cope with the full implications of a changing climate;
- Ensure that in planting new trees and woodland biosecurity is robust to avoid the introduction of pests and diseases.

4. Ensure the sustainable management of associated green infrastructure:

Where trees and woodland are retained or planted to provide screening, mitigation or compensation consider how the identified function can be sustainably maintained. For instance woodland could be managed as coppice with standards or under a continuous cover system with the income from the wood products supporting the long term management.

5. Consider how the proposals might help support sustainable management of existing woodland: by using locally sourced wood/timber in associated infrastructure.

Specific observations on each option which we would draw your attention to:

Option 3V1: The scale of the loss of ancient woodland (> 20 hectares) and the implications of the severance this route would cause on the wider Binsted Wood Ancient Woodland complex is unprecedented in recent times.

Option 4/5AV2: Cuts through the centre of Barns Copse and Hundredhouse Copse resulting in the loss of 5.33 ha of ancient woodland which we understand has been noted as retaining very rare bat species.

Option 4/5 AV1: Results in the loss of 2.5 ha of ancient woodland and may well impinge on the movement of the rare bat populations within the Barns Copse.

Option 5/BV1: While this route represents the lowest impact on ancient woodland (Loss of 1.5 ha of ancient woodland) we note the significant landscape severance the route would create.

Option 1/V5 and Option 1 V9: While these options would result in the loss of 8.37 ha and 7.44 ha of ancient woodland respectively we would encourage you to consider whether this level of loss could be further reduced by appropriate engineering. If one of these routes were chosen we would also ask whether the impact of the loss could be partly compensated for by re-establishing ecological links between the ancient woodland to the south (Binstead woods) and to the North (Rewell Wood), for instance with 'green' bridges.

We hope these comments are helpful to you. If you have any further queries please do not hesitate to contact me.

Yours faithfully



Partnership & Expertise Manager South East

Appendix 1:

Ancient Woodland. The Forestry Commission is pleased to provide you with the below information that may be helpful for you to consider:

- Details of Government Policy relating to ancient woodland
- Information on the importance and designation of ancient woodland

Ancient woodlands are irreplaceable. They have great value because they have a long history of woodland cover, with many features remaining undisturbed. This applies equally to Ancient Semi Natural Woodland (ASNW) and Plantations on Ancient Woodland Sites (PAWS).

It is Government policy to refuse development that will result in the loss or deterioration of irreplaceable habitats including ancient woodland, unless *“there are wholly exceptional reasons and a suitable compensation strategy exists”* (National Planning Policy Framework paragraph 175).

We also particularly refer you to further technical information set out in Natural England and Forestry Commission’s [Standing Advice on Ancient Woodland](#) – plus supporting [Assessment Guide and Case Decisions](#).

Please be aware of the information provided on the [Ancient Woodland Inventory](#) (maintained by Natural England), which can be viewed on the [MAGIC Map Browser](#).

If one of the routes is chosen, in principle, to take to detailed design we may be able to give further support in developing appropriate design, woodland management mitigation or compensation measures. Please note however that the Standing Advice states that

“Ancient woodland, ancient trees and veteran trees are irreplaceable.”

We suggest that you take regard of any points provided by Natural England about the biodiversity of the woodland.

We also assume that as part of any forthcoming Development Consent Order, a screening opinion as to whether or not an Environmental Impact Assessment is needed. If not, it is worth advising you approach the Forestry Commission to provide an opinion as to whether or not an Environmental Impact Assessment is needed under the Environmental Impact Assessment (Forestry) (England and Wales) Regulations 1999, as amended.

A summary of Government policy on ancient woodland

[Natural Environment and Rural Communities Act 2006](#) (published October 2006).

Section 40 – “Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity”.

[National Planning Policy Framework](#) (published July 2018).

Paragraph 175 – “*development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists*”.

[National Planning Practice Guidance](#) – Natural Environment Guidance. (published March 2014)

This Guidance supports the implementation and interpretation of the National Planning Policy Framework. This section outlines the Forestry Commission’s role as a non statutory consultee on “*development proposals that contain or are likely to affect Ancient Semi-Natural woodlands or Plantations on Ancient Woodlands Sites (PAWS) (as defined and recorded in [Natural England’s Ancient Woodland Inventory](#)), including proposals where any part of the development site is within 500 metres of an ancient semi-natural woodland or ancient replanted woodland, and where the development would involve erecting new buildings, or extending the footprint of existing buildings*”

It also notes that ancient woodland is an irreplaceable habitat, and that, in planning decisions, **Plantations on Ancient Woodland Sites (PAWS) should be treated equally in terms of the protection afforded to ancient woodland in the National Planning Policy Framework**. It highlights the Ancient Woodland Inventory as a way to find out if a woodland is ancient.

[The UK Forestry Standard](#) (4th edition published August 2017).

Page 23: “Areas of woodland are material considerations in the planning process and may be protected in local authority Area Plans. These plans pay particular attention to woods listed on the Ancient Woodland Inventory and areas identified as Sites of Local Nature Conservation Importance (SLNCIs)”.

[Keepers of Time](#) – A Statement of Policy for England’s Ancient and Native Woodland (published June 2005).

Page 10 “The existing area of ancient woodland should be maintained and there should be a net increase in the area of native woodland”.

[Natural Environment White Paper “The Natural Choice”](#) (published June 2011)

Paragraph 2.53 - This has a “renewed commitment to conserving and restoring ancient woodlands”.

Paragraph 2.56 – “The Government is committed to providing appropriate protection to ancient woodlands and to more restoration of plantations on ancient woodland sites”.

[Standing Advice for Ancient Woodland and Veteran Trees](#) (first published October 2014, revised November 2018)

This advice, issued jointly by Natural England and the Forestry Commission, is a material consideration for planning decisions across England. It explains the definition of ancient woodland, its importance, ways to identify it and the policies that are relevant to it.

The Standing Advice refers to an [Assessment Guide](#). This guide sets out a series of questions to help planners assess the impact of the proposed development on the ancient woodland.

[Biodiversity 2020: a strategy for England’s wildlife and ecosystem services](#) (published August 2011).

Paragraph 2.16 - Further commitments to protect ancient woodland and to continue restoration of Plantations on Ancient Woodland Sites (PAWS).

Importance and Designation of Ancient and Native Woodland

Ancient Semi Natural Woodland (ASNW)

Woodland composed of mainly native trees and shrubs derived from natural seedfall or coppice rather than from planting, and known to be continuously present on the site since at least AD 1600. Ancient Woodland sites are shown on Natural England's Inventory of Ancient Woodland.

Plantations on Ancient Woodland Site (PAWS)

Woodlands derived from past planting, but on sites known to be continuously wooded in one form or another since at least AD 1600. They can be replanted with conifer and broadleaved trees and can retain ancient woodland features, such as undisturbed soil, ground flora and fungi. Very old PAWS composed of native species can have characteristics of ASNW. Ancient Woodland sites (including PAWS) are on Natural England's Inventory of Ancient Woodland.

Other Semi-Natural Woodland (OSNW)

Woodland which has arisen since AD 1600, is derived from natural seedfall or planting and consists of at least 80% locally native trees and shrubs (i.e., species historically found in England that would arise naturally on the site). Sometimes known as 'recent semi-natural woodland'.

Other woodlands may have developed considerable ecological value, especially if they have been established on cultivated land or been present for many decades.

Information Tools – The Ancient Woodland Inventory

This is described as provisional because new information may become available that shows that woods not on the inventory are likely to be ancient or, occasionally, vice versa. In addition ancient woods less than two hectares or open woodland such as ancient wood-pasture sites were generally not included on the inventories. For more technical detail see [Natural England's Ancient Woodland Inventory](#). Inspection may determine that other areas qualify.

As an example of further information becoming available, Wealden District Council, in partnership with the Forestry Commission, Countryside Agency, the Woodland Trust and the High Weald AONB revised the inventory in their district, including areas under 2ha. Some other local authorities have taken this approach.

Further Guidance

[Felling Licences](#) - Under the Forestry Act (1967) a Felling Licence is required for felling more than 5 cubic metres per calendar quarter. Failure to obtain a licence may lead to prosecution and the issue of a restocking notice.

[Environmental Impact Assessment](#) - Under the Environmental Impact Assessment (Forestry) (England and Wales) Regulations 1999, as amended, deforestation which is likely to have a significant impact on the environment may also require formal consent from the Forestry Commission.

[REDACTED]

To: A27 Arundel Bypass <A27ArundelBypass@highwaysengland.co.uk>
Subject: A27 Arundel Bypass Further Consultation

Dear Highways England

The Freight Transport Association (FTA) welcomes the opportunity to respond to the A27 Arundel Bypass Further Consultation.

In line with previous consultations responses on the A27, the FTA believes improvements to the A27 are vital as it is the most important road connecting the south coast from east to west. It acts as the key road link in the area with no other suitable alternatives for freight traffic to transport goods from Portsmouth to Pevensey.

Following consideration of the new proposals FTA supports magenta (option 4/5AV1). The anticipated journey times savings are significant and it will improve capacity, reduce congestion and connectivity.

Delays and congestion cost hauliers and the economy money and the FTA is supportive of measures which seek to address this important problem. Capacity across the road network is also major problem and FTA supports Highways England in its efforts to improve the situation along this stretch of the A27.

As the FTA's Policy Manager covering the South East area I would be more than happy to discuss our policies further if that would be helpful.

Regards,

[REDACTED]

[REDACTED]

www.fta.co.uk

Friends of the Earth
c/o 39-41 Surrey Street
Brighton, BN1 3PB
Tel 07712 038533



Sent via e-mail to: A27ArundelBypass@highwaysengland.co.uk

24 October 2019

Friends of the Earth response to the further consultation on route options for the Arundel bypass.

Summary

We object to all the route options given. We believe that the case for building a 70mph dual carriageway through or near the South Downs National Park has not been adequately made. It is our view that as we are facing a climate and nature emergency, Highways England's approach to dealing with transport issues in the area needs to be reviewed. We also have concerns about how the consultation has been carried out, with no option for participants to opt for alternatives other than to "do nothing" or the six high speed dual carriageway options.

Local residents have put forward a viable, sustainable alternative which has not formed part of this consultation. We support this "Arundel Alternative" option of a shorter wide single carriageway 40mph road combined with a package of sustainable transport measures to ensure traffic does not increase and that residents and visitors have access to high quality, low carbon transport infrastructure.

A key omission is a scheme objective relating to greenhouse gas and other emissions. We also feel that the objective relating to the National Park should be strengthened.

We strongly suggest that an overall scheme objective relating to the need to mitigate climate change and improve air quality is inserted.

We also believe that the scheme objective relating to the South Downs National Park should properly reflect the legal duty to conserve and enhance the National Park.

The current remit of Highways England as a body is to maintain and build new roads. We believe that a wholesale change needs to take place so that thorough assessments are made with a view to coming up with sustainable transport solutions which do not start from a premise that a road's capacity must be increased to solve local transport issues - known as a "predict and provide" approach.

We ask that a halt is called while a new "vision and validate" approach is agreed. We believe that a new body should be established which has the key aim of transforming

the way people travel in the area in light of the need to meet the UK's climate objectives, the need to improve air quality and commitments to protect and enhance nature. This could provide a trailblazing approach to planning for transport fit for the 21st Century.

We have not used the online consultation form as it was set out in such a way that we felt unable to use it to make the points below. Being allowed to only give comments after choosing "do nothing" or 6 routes which we could not support, put us in an impossible position. We have had many people comment that they likewise did not want to choose any of the options you gave them but felt pushed to choose Cyan or Beige, or "do nothing" in order to be able to complete the free-form boxes. We argue that this will have therefore made the results of questionable value.

Introduction

We understand that Highways England was tasked with looking at a suite of options to deal with some transport issues in the Arundel area along the A27. This should have been a full multi modal study addressing both local and wider needs. Given the environmental sensitivities both locally and globally we would have liked to have seen a proposal that offered a package of measures which aims to stabilise and reduce traffic whilst decreasing emissions and without harming ancient woodland and the national park.

Given the limitations of the current options put forward we believe that the whole scheme needs to be reassessed. We are in an era of a climate and nature emergency. The Arundel area deserves something better than a choice of 6 high speed dual carriageway routes – all of which will increase traffic, increase emissions and harm nature and wildlife.

We understand that Highways England's remit currently relates to maintaining and building roads. We believe that the purposes of this body as well as the way that it operates and takes decisions must be reviewed so that it can deliver transport solutions in line with the challenges we are facing at a time of a climate and nature emergency. In particular, sustainable alternatives to road capacity increases should always be seriously and fully considered as a matter of course.

Climate Change

The Climate Change Act and the government's new legally binding target passed in June 2019 to achieve net zero greenhouse gas emissions by 2050 requires all government agencies and local authorities to revisit their strategies and plans which deal with transport.

Transport is the only sector where emissions have increased since 1990 and is the single largest source of greenhouse gas emissions in the UK – accounting for 27% of emissions.ⁱ This sector is a key cause of the country not meeting the 4th and 5th carbon budgets.ⁱⁱ This is compared to all other sectors where emissions have reduced in that time.ⁱⁱⁱ It is not credible for Highways England to ignore this issue

and to claim that in comparison to the overall carbon budget the increase is minimal. The cumulative impact of successive road building has been to stimulate increasing emissions not just on each road but in the surrounding areas as well. This is not considered in Highways England's calculations.

This context must be taken into account when making a decision at Arundel, especially when the Highways England's options pre-date the new legally binding climate change target.

It is clear (from the brochure for this scheme and from talking to staff at one of the exhibitions) that the need to address climate change has not properly been factored into the plans for Arundel. The scheme objectives do not mention this critical issue, nor is it mentioned once in the consultation brochure. This is important because many people (who do not read the full technical documents) are not being informed about a key environmental impact of the project. The consultation brochure should have presented a summary picture of costs and benefits including greenhouse gas emissions and the impact on air quality. Neither of these components are mentioned in the table on pages 16/17.

Chapter 14 of the Environmental Assessment Report does address climate change. It quotes the National Networks National Policy Statement (NN NPS) regarding the fact that any individual new scheme's contribution, in isolation, is unlikely to affect meeting the UK's carbon budgets. However, we would argue that this scheme needs to be considered at a strategic level. It is clear that there is a push for higher capacity new roads all along the A27 with projects constantly being worked on at Worthing, Chichester and east of Lewes. If a high speed dual carriageway is built at Arundel this will inevitably increase traffic and increase the calls for further dual carriageways along the coast, leading to further induced traffic and thus emissions. Currently no-one appears to be tasked with looking at this wider picture with regard to future emissions.

The National Planning Policy Framework (NPPF) advises local authorities to adopt a proactive approach in their plans to mitigate and adapt to climate change, "taking into account the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating from rising temperatures. Policies should support appropriate measures to ensure the future resilience of communities and infrastructure to climate change impact..."

Section 19(1A) of the Planning and Compulsory Purchase Act 2004 requires local planning authorities to include in their Local Plans "policies designed to secure that the development and use of land in the local planning authority's area contribute to the mitigation of, and adaptation to, climate change." (paragraphs 148 – 150) Were this proposal to go forward it would directly undermine local authorities' and others' efforts to plan for a low carbon future

The West Sussex Plan 2017-2022 aims to achieve a "sustainable environment" and a key path to achieving that is seen as reducing greenhouse gas emissions.

Proceeding with any of these 6 options will increase emissions – by an estimated range of 202 ktCO₂e – 376 ktCO₂e. This must be looked at in the context of calls to

increase capacity more widely along the A27 which are then likely to lead to greater increases in traffic and thus emissions. It is vital that West Sussex County Council re-addresses the way in which it plans and delivers transport infrastructure to encourage a much higher proportion of journeys to be made in a low carbon and healthier manner.

The West Sussex Transport Plan 2011-2026 also highlights tackling climate change as a key theme in guiding future investment in transport infrastructure. It seeks to provide *“a resilient transport network that complements the built and natural environment whilst reducing carbon emissions over time”*. The document includes a number of methods of doing this including *“reduce unnecessary trips by motorised vehicles and encourage the use of more sustainable modes of transport”*. It is hard to see how building a 70mph dual carriageway around Arundel helps to meet these aims.

There is a need for car miles to be cut by at least 20% (20-60%) by 2030 in the UK to meet climate targets.^{iv} The schemes put forward clearly increase traffic so are not in line with our national and international climate commitments.

Air Pollution

Air pollution in the UK is a serious health crisis, with up to 36,000 early deaths a year attributable to air pollution, according to the government’s COMEAP advisors.^v It is increasingly understood to affect apparently every part of the body and every stage of life.^{vi}

As well as requirements for the government to meet EU legal Limit Values, Local Authorities have requirements under the Local Air Quality Management (LAQM) regime including on Air Quality Management Areas (AQMAs). For the toxic gas Nitrogen Dioxide (NO₂) the legal Limit Value and the LAQM Objective target are both currently set at 40 micrograms per cubic metre (µg/m³), which is also currently the level of the World Health Organisation (WHO) standard. However the WHO has found health effects below this 40 µg/m³ level^{vii} and limits will be revised downwards, meaning that the 40 µg/m³ level is not a safe one. Therefore, every effort must be made to reduce levels as much as possible.

All the Arundel options would result in some areas seeing a worsening of NO₂ levels, some by a considerable amount. Further, on the evidence given and assumptions used, while none of the options would see levels being taken over the LAQM Objective level nor worsening it if already over, each Arundel option would in some places result in the scheme creating a serious risk of the Objective being exceeded by taking levels too close to the 40 µg/m³ limit, and between 35 µg/m³ and 40 µg/m³ in 2026 compared with the Do Minimum.^{viii}

Given the risk of taking air pollution over Objective levels, and the risks around assumptions of traffic levels and emissions factors of vehicles on the roads, these results are not acceptable - especially given the fact that the 40 µg/m³ level is not one which is considered safe for health.

There should be a scheme objective to “deliver on the need to reduce greenhouse gas and other emissions in order to help mitigate climate change and improve air quality”.

Nature impacts

We have grave concerns about the adverse impact (directly and indirectly) of all the routes on the South Downs National Park, ancient woodland and the wildlife rich water-meadows of the Arun valley.

The NPPF states that great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to these issues. Legislation places a statutory duty on public bodies to have regard to the relevant Park purposes when coming to decisions or carrying out their activities relating to or affecting land within the Parks.

There is a scheme objective regarding the South Downs National Park which is to “respect the SDNP and special qualities.” This is inadequate. As mentioned in the consultation brochure, there is a legal duty to have regard to purposes of the national park and one of the two key purposes of the SDNP is “to conserve and enhance the natural beauty, wildlife and cultural heritage of the National Park.” It is hard to see how the proposed scheme would either conserve or enhance the National Park. On the contrary, all of the proposed options will cause significant damage to the national park or its setting, with only the grey route actually avoiding any construction within the National Park.

The objective should reflect the legal duty to conserve and enhance the National Park.

The boundaries of the national park are not clear on the map of routes and should be highlighted better with a line marking the boundary rather than a different shade of green when there are two other green shaded areas.

All of the options destroy various amounts of ancient woodland or important woodland and other habitats. Therefore, it is difficult to see how the objective to: *Deliver a scheme that minimises environmental impact and seeks to protect and enhance the quality of the surrounding environment through its high-quality design* has been given any weight within this process, when every option causes so much damage.

Other responses will be highlighting the impacts of this scheme on the natural environment within and beyond the National Park. We support the response submitted by the Sussex Wildlife Trust.

Review urgently needed.

It is clearly time to review the whole approach at Arundel. Not only is there a need to fundamentally re-evaluate the need for a new high speed road here, there is a need

for Highways England and other authorities to take stock of new trends in behaviour which is leading to far more uncertainty regarding future travel patterns. The models which have been used to predict demand for this road are based on old behaviour patterns which no longer hold true today. Research commissioned by the South Coast Alliance for Transport and the Environment (SCATE)^{ix} points out that:

- New technologies are changing the way we travel (for example with much more online shopping and increased levels of home working)
- New mobility services are likely to reduce the need for car ownership
- Young people are no longer striving to own and drive cars at the same level as in the past.
- Traffic levels have not changed significantly in West Sussex, nor at national level, in the last two decades.

We argue that in this changing landscape, the traffic forecasts upon which this scheme is based need reviewing. There is currently a “predict and provide” approach to transport planning. We believe that there is an urgent need to move to a more progressive “vision and validate” approach which requires leadership from Highways England, West Sussex County Council, other authorities and key politicians. Such an approach would focus on delivering on economic, social and environmental goals in equal measure. It would include a multi modal approach which –

- Encourages the use of sustainable transport – eg facilitating car sharing schemes, personalised travel planning and station travel planning
- Provides excellent alternatives to car based journeys – eg creating high quality walking and cycling networks between settlements in the area, improving bus and train services
- Focuses on integrated development planning – eg strengthening planning policies to reduce travel demand and travel distances
- Uses proactive demand management – eg development of workplace parking strategies and traffic management schemes which help improve traffic flows at peak times
- Supports highway network operations – eg with signing to advise drivers about alternative travel options when there is congestion and specific improvements at pinch points
- Promotes coordinated strategies among public transport providers and active travel facilities
- Uses a proactive marketing and communications strategy making use of modern communications channels and mobile apps to help with behaviour change.

Conclusion

We have set out above the importance of the transport sector in contributing to greenhouse gas and other polluting emissions. This context cannot and must not be ignored when making a decision at Arundel.

We believe that the impacts on the climate, air, landscape and wildlife of any of the 6 routes offered are too high a price to pay to save a few minutes of journey time when alternative solutions have not been adequately explored.



On behalf of Friends of the Earth, England Wales and Northern Ireland

About us

Friends of the Earth campaigns for everyone to have a right to healthy places to live and for fair shares of our resources, in order to safeguard future generations. Friends of the Earth has long advocated a participative, democratic and fair land use and transport planning system that delivers sustainable development and safeguards the public interest.

ⁱ Final Greenhouse gas emissions national statistics, Department for Business, Energy and Industrial Strategy, updated 2019. <https://www.gov.uk/government/collections/final-uk-greenhouse-gas-emissions-national-statistics>

ⁱⁱ The Committee on Climate Change 2019 Progress Report

<https://www.theccc.org.uk/publication/reducing-uk-emissions-2019-progress-report-to-parliament/>

ⁱⁱⁱ A net zero carbon budget for the whole transport sector, Friends of the Earth and Transport for Quality of Life, April 2019 <https://policy.friendsoftheearth.uk/insight/net-zero-carbon-budget-whole-transport-sector>

^{iv} More than electric cars. Friends of the Earth and Transport for Quality of Life, Feb 2019

<https://policy.friendsoftheearth.uk/insight/more-electric-cars>

^v <https://www.gov.uk/government/publications/nitrogen-dioxide-effects-on-mortality>

^{vi} <https://www.theguardian.com/environment/ng-interactive/2019/may/17/air-pollution-may-be-damaging-every-organ-and-cell-in-the-body-finds-global-review>

^{vii} <http://www.euro.who.int/en/media-centre/sections/press-releases/2013/01/newly-found-health-effects-of-air-pollution-call-for-stronger-european-union-air-policies>

^{viii} See Appendix 5-8 of <http://assets.highwaysengland.co.uk/roads/road-projects/A27+Arundel+Improvement/EAR2019/EAR+Chapter+5+Appendices+5.1+to+5.10.pdf>, and summarised in sections 5.9.3 to 5.9.8 of <http://assets.highwaysengland.co.uk/roads/road-projects/A27+Arundel+Improvement/EAR2019/EAR+chapter+5+air+quality.pdf> – with 5.9.1.2 making clear embedded mitigation measures are already assumed to be included.

^{ix} A New Transport Vision for the South Coast, Integrated Transport Planning, in association with the University of the West of England, 2017. <https://scate.org.uk/wp-content/uploads/2018/10/Scate-report-lo-res-Full-Strategy-FINAL.pdf>



Highways England
Bridge House
1 Alan Tree Close
Guildford
GU1 1LQ

[Redacted]
[Redacted]

11 October 2019

Dear [Redacted]

Pre-application Advice

A27 IMPROVEMENTS NEAR ARUNDEL, WEST SUSSEX

Thank you for your consultation with regard to six possible route options proposed for the A27 Arundel Bypass. Historic England provides the following advice.

Summary

We raise concerns regarding the quality and conclusions of the Environmental Assessment particularly for Chapter 9 on Cultural Heritage. This notwithstanding while all options would cause harm to the significance of designated assets primarily through changes to their setting options 100 and 109 are the least harmful overall in heritage terms. We think that options 100/A100/A00 and B00 would have serious impacts on the settings of Tortington Priory scheduled monument Arundel town and its conservation area as well as high grade designated heritage assets such as Arundel Castle scheduled and grade I listed or the RC Cathedral grade I listed. This is primarily due to the incursion of a new in parts elevated road directly across the coastal floodplain to the south of Arundel passing close to Tortington Priory.

Advice

Heritage Significance and Impact

All six route options proposed will cause harm to heritage significance. Options 100 and 109 would have the lowest impact upon overall heritage significance this is because they largely follow the route of an existing road which impacts upon the setting of nearby heritage assets landscape character and the preservation of archaeological remains. The cumulative additional impact caused by Options 100 and 109 will therefore be comparatively low when compared to Options 100/A100/A00 and B00 which represent completely new and substantial intrusions into the historic environment.

Unlike Options 100 and 109 all remaining route options would have a considerable



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impact upon the setting of the scheduled monument of Tortington Priory (List Entry Ref 1019000 which includes the grade II listed barn (Ref 1019000 Tortington Priory) as intended to be both a spiritual enclosure and the centre of an agricultural estate and its setting within peaceful agricultural surroundings is therefore integral to understanding its significance. The construction and operation of a busy bypass within close proximity would have a major impact upon its contextual and visual relationships with this surrounding landscape. Although route options A1/A and B1 have been moved further away from the Priory we think that the size and nature of the proposed scheme will mean that the magnitude of change within the setting of the Priory would nevertheless remain very high and not in our view capable of being assessed as moderate as described in 9.0.

As the scheduled area constitutes only the centre of the wider monastic estate there is also potential for Options A1/A and B1 to impact upon associated archaeological features that survive within the monument's vicinity. A medieval moated site to the south of Tortington Priory (next to the river) has already been located and excavated. There is thus also some potential for any such remains to be of exceptional significance to the Priory monument itself (i.e. of national importance).

Options A1/A and A would also all have a considerable impact upon historic Arundel (designated as a Conservation Area) and many of the designated assets within it (in particular the scheduled and listed castle or the grade I listed cathedral) through changes to their setting. This arises from the changes proposed within the historic landscape adjacent (in particular the broad expanse of coastal floodplain lying directly to the south below Arundel) which has always had a direct and important relationship with the town and therefore forms part of its setting. The relatively open and undeveloped character of this plain contributes significantly to an understanding its historic past (being which it has always been a marginal area or hinterland exploited for its resources. It was first a sea inlet (later a marshy estuary) and remained in use for agriculture and small scale industry even as medieval Arundel developed and grew.

Meandering across this plain is the River Aron which is thought to have been navigable to Arundel during the medieval period and indeed the prime reason for the original founding and development of the port town. The river would likely have been the most important approach to medieval Arundel and thus unimpeded views along it to and from the town are key to understanding the establishment and development of Arundel and its relationship to its wider surroundings.

The dominance of Arundel Castle in views from and across the coastal plain are also entirely deliberate (it was intentionally built in this location to be the most dominant building for miles around) and are integral to understanding its historic function and importance. This importance is highlighted in the Landscape and Visual Quality chapter which states that the view from the castle out to the floodplain reinforces the





commanding strategic location of the town and adds to the sense of place.

The construction of a large new bypass across the coastal plain would severely detract from its open and undeveloped character... The EA which states that this is a landscape with a low capacity to accommodate change... By utilising an existing crossing just below the historic town Options 1 and 19 would avoid such high levels of harm.

Environmental Assessment

Although the Environmental Assessment contains some good baseline data it constitutes a weak overall assessment of impact upon heritage significance. In particular the assessment of the setting of heritage assets is poor... It has also led to a number of incorrect and unhelpful conclusions including the impression that Options 1 and 19 are amongst the most harmful routes to heritage simply because they sit closest to the largest number of designated assets when in fact the reverse is true for the reason set out above.

The approach to assessing historic landscape within the Cultural Heritage chapter is also inadequate as it arbitrarily equates the different routes impact upon historic landscape with the number of historic landscape areas through which a route passes. The Landscape and Visual Quality chapter presents a far more qualitative assessment of impact upon landscape character but does not specifically assess the significance of designated heritage assets and impact on these through changes to their setting. Nor do these conclusions appear to have been used to inform the Cultural Heritage chapter as there is considerable inconsistency between statements within the two chapters of the document.

The Cultural Heritage chapter also appears to conflate the setting of assets with the issue of curtilage. We do not think that the question of curtilage of designated assets is a key consideration in this assessment as curtilage is usually used to determine whether subsidiary elements within the surrounds of a designated asset are curtilage listed. The question of setting of assets however is of high importance in this case and we suggest that this is clarified within the chapter.

We also question whether it is correct to consider that most impacts to setting may be





effectively mitigated through screening. In particular it would not be possible to mitigate the impact that a new road bridge over the River Aron would have upon important sites along it as any screening would only see these sites further away. The harmful effect of a new road bridge is again recognised within the Landscape and Visual Quality Chapter and emphasised especially for options 1A and B within the Cultural Heritage Chapter. Screening is also likely to only partially mitigate harm to the significance of Tortington Priory by changes within its setting.

Advice regarding impacts to non-designated archaeology should be sought from [redacted] archaeological advisor to West Sussex County Council and we do not wish to now provide detailed comments on this aspect of the proposal. Historic England would expect to focus future advice on any nationally important non-designated archaeological assets or the potential for these. This said we do think that the impact of Options 1A and B upon non-designated archaeology has been so far poorly assessed and hence possibly underestimated. This is because the assessment equates archaeological impact with the number of HER data points through which a route passes when in fact many of these data points represent remains that have already been excavated. On their own they may not be a good indicator of future archaeological potential. Land without such known archaeological remains may nevertheless have potential for these to exist but be as yet unrecognised.

We highlight that with the exception of the previous preferred route Option A there has been little further research into archaeological potential e.g. using non-intrusive techniques such as geophysics, lidar or field walking. With this it is hard to make more definitive statements on the archaeological potential of the different routes and therefore the likely levels of harm associated with each.

Considering the frequency and importance of Palaeolithic remains within the study area we think that the EA also contains very little discussion regarding the potential for the proposals to impact upon such remains or their likely significance if found. We note the absence of any research into previous relevant investigations, borehole records or geo-archaeological studies/mapping which might contribute further understanding to this matter.

Based on the above the assessment therefore fails to adequately consider the potential for encountering remains of national importance for example some possible Palaeolithic remains or remains associated with Tortington Priory under the National Networks NPS. Any nationally important archaeological remains need to be treated in accordance with the same policies that govern designated assets.

Policy

The National Policy Statement for National Networks hereafter NN NPS outlines the



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Government's policies to deliver the development of Nationally Significant Infrastructure Projects with paragraphs 11 to 14 relating to the historic environment. The NN NPS effectively replaces the National Planning Policy Framework as the primary statement of Government policy against which the proposals should be considered (presumably as a Nationally Significant Infrastructure Project and a future Development Consent Order application) but it covers similar considerations (specifically as paras 11 and 14)

The NN NPS requires that developers describe the significance of any heritage assets affected (including any contribution to that significance made by their setting). Appropriate expertise should be used to make this assessment and the level of detail should be proportionate to the assets' importance and sufficient to understand the potential impact of the proposal on their significance (14)

It requires that the Secretary of State take into account the significance of heritage assets and that this should be used to avoid or minimise conflict between their conservation and the proposal. (19) It further emphasises the desirability that new development should make a positive contribution to the character and local distinctiveness of the historic environment (14)

It is also necessary that any remaining harm has clear and convincing justification which is then weighed against the public benefits (including for a recognition that the greater the harm to the significance of the designated asset the greater the justification will need to be (14)

Furthermore we highlight that there is a presumption in favour of the conservation of designated heritage and the more important the asset the greater the presumption should be (11). At present and with limited design information it is not possible for us to fully determine if the level of harm to the significance of heritage assets might be *substantial* (14) or *less than substantial* (14). All harm however requires clear and convincing justification and even if it is para 11 of the NN NPS that is most applicable *less than substantial harm* is an important factor to be weighed in the overall balance of harm to public benefits.

Position

Routes 11/A11/A and B will all have a very considerable impact upon heritage significance and this would be at odds with the policies of the NN NPS (14)(11) which require a presumption in favour of the conservation of designated heritage assets and highlight the desirability of new development making a positive contribution to local character.

Options 11 and 19 constitute considerably less harmful route options and in our view the adoption of one of these routes would help to minimise harm to heritage



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significance as far as possible and better comply with policy 1.9 of the NN NPS.

Considering the far higher level of likely harm to heritage significance associated with Options 1A and 1B we think that the choice of one of these routes would need to be justified by a very strong case which demonstrated a far greater public benefit as compared to that conferred by Options 1.9 of the NN NPS.

Next Steps

The Environmental Assessment is a poor overall assessment of impact and hence harm to heritage significance and should be revised in relation to our comments above and using appropriate expertise as required by policy 1.9 of the NN NPS. Any revised setting assessment should include photomontages to demonstrate statements about impact and further desk based and fieldwork should also be recommended to better understand archaeological potential.

When choosing a preferred route for future development we would urge you to seriously consider our representations above concerning the relative harm of these routes and their compliance with the NN NPS.

You should also consider the views of [redacted] archaeological advisor to West Sussex County Council and [redacted] conservation officer for Aron DC with regard to the impact upon non-designated archaeological remains and to listed buildings and conservation areas respectively.

Once a preferred route is chosen we encourage further consultation with Historic England in order to develop the proposal in a way that is conducive to the conservation of heritage significance and in accordance with the NN NPS. Following announcement of the preferred route we can then offer one free cycle of pre-application advice but after which all further pre-application advice will most probably be chargeable under our Enhanced Advisory Service <https://historicengland.org.uk/services/skills/our-planning-services/enhanced-advisory-services/> we will expect to agree cost recovery under this to cover our non-statutory input to the making of a Development Consent Order application including any Statement of Common Ground.

If you have any questions arising from this response we will be pleased to try to answer these.

Yours sincerely



11TH FLOOR, CANNON BRIDGE HOUSE, 200 GATE HILL, LONDON EC1R 4YA

Telephone 020 7973 3700
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Historic England



on behalf of



Inspector of Ancient Monuments

Email [REDACTED]

cc [REDACTED] Archaeological Consultant for West Sussex County Council
[REDACTED] Conservation Officer for Arun DC

A27 IMPROVEMENTS NEAR ARUNDEL, WEST SUSSEX Pre-application Advice

List of information on which the above advice is based

Arun Arundel Bypass Environmental Assessment Report



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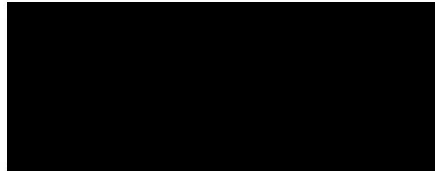
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Email to:

A27ArundelBypass@highwaysengland.co.uk



Date 21 October 2019

Dear Sir/Madam

**A27 ARUNDEL BYPASS FURTHER PUBLIC CONSULTATION
CONSULTATION RESPONSE FROM HORSHAM DISTRICT COUNCIL**

Thank you for the opportunity to respond further to the proposals to improve the A27 in respect of a new Arundel bypass. This is of huge interest and importance to this council not least because of the impact the proposals could have in the delivery of economic benefits and growth to both the south coast corridor along the A27 and to this district. I have previously highlighted the significant problem of many drivers wanting to travel between Fontwell and Shoreham (and in reverse) choosing a route that takes them via our district's southern villages of Amberley, Storrington and Pulborough to avoid inevitable delays and congestion on the A27. This 'rat running' is a significant contributor to poor air quality in Storrington where some 18,000 vehicles a day pass through the village High Street.

Background

The southern boundary of Horsham District is close to Arundel (4 miles) and there are a number of road connections with the A27, most notably the links via the A29 from Fontwell and the A284 from Arundel. These provide a route (via B2139/A283) passing through the villages of Amberley and Storrington, crossing the A24, continuing east to Steyning and eventually rejoining the A27 at Shoreham by Sea. While this route is a longer distance, it is for many drivers infinitely preferable to the delays and congestion they would face by remaining on the A27. In addition, it is also our experience that drivers choose other routes further north to avoid congestion on the south coast, and this contributes to congestion and air quality problems in villages such as Cowfold.

A consequence of the high levels of traffic and congestion, especially at peak travel times, passing through Storrington has been poor air quality. In 2010, Horsham District Council declared an Air Quality Management Area in Storrington on account of exceedances of the air quality objective level for nitrogen dioxide (NO₂). An action plan was prepared outlining a range of measures to tackle the poor air quality. Many of these are not measures that Horsham District Council, as a district authority, can bring about directly as they relate to highway improvements which are a matter for the highway authority (West Sussex County Council). A steering group was therefore established which drew together West Sussex County Council, the local Parish

Council and members and officers from Horsham District Council to help bring forward the measures in the action plan. The one that has topped the list has been for improvements to the A27 as part of the main east/west trunk route in the region.

General comments

Horsham District Council is fully supportive of proposals to provide a bypass around Arundel. The Council previously favoured the route shown as Option 5a. There is now an alternative 'Magenta' Option (4/5AV1) which, whilst similar to the earlier Option 5a, would have less adverse effect on Binsted Woods and areas of ancient woodland. Magenta is therefore the Council's preferred option. The reason for this is that the decrease in traffic using the B2139 and the A283 will be greater for this option than for other options, as shown on pages 16 and 18 of the Further Consultation document ('Benefits and Impacts' and 'Figure 3: Annual Average Daily Traffic respectively), whilst also avoiding too significant an impact on areas of ancient woodland. The selection of one of this option will therefore be of greatest overall benefit including improving air quality in Storrington and reducing the volume of 'rat running' on the route through the Horsham district villages which lie between Fontwell and Shoreham.

This Council would encourage Highways England to construct any bypass and consequential bridges to the highest possible architectural standard and to take appropriate account of any potential flooding issues, given the sensitivity of the local environment.

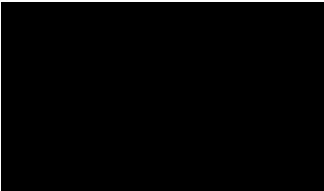
As part of the scheme, we consider significant increases in provision for cycling could contribute to a reduction in the number of car journeys, and which in turn would reduce congestion and improve air quality. We would therefore encourage Highways England to support through their 'Designated Funds' the creation of a cycle-way between the South Downs National Park via Arundel to the coast along the River Arun and improved parking for commuters, tourists and residents at Ford railway station. You may wish to refer to the West Sussex County Council Walking and Cycling Infrastructure Strategy as part of any further consideration of improvements to this route.

In addition to this consultation, Horsham District Council is aware of further proposals to address wider issues of congestion along the A27. It is considered that it may be beneficial to continue to examine whether it may be possible to achieve a comprehensive solution to ease congestion on the Lancing to Chichester section of the A27 as a whole. It is recognised that there are significant national budgetary constraints in relation to road schemes, but it may be that a single scheme, rather than the more 'piecemeal' solutions that have been proposed to date, would be more cost effective and successful than individual plans. Such a solution would be of huge economic benefit and could also help to take into account the step change in housing delivery, which has been identified by the Government and therefore ensure that any enhancements to the road are as future-proofed as possible.

With regard to the 'Review of alternative transport options' section at page 10, I note that there are no significant plans for bus use in the area, and no current evidence to suggest that bus services could accommodate the overall need for travel. A similar conclusion is reached for train travel. As public transport use is fairly low in this area, the Council urges more serious

consideration is given to improving public transport as a further means of effectively managing the transport network into the future to ensure that the step change in housing delivery can be delivered without further increases in vehicle numbers using our roads. Without this there is a risk that additional housing development in West Sussex could ultimately offset the benefits of the new bypass if further significant transport movements are the result. It is appreciated that this will need joint working across organisations (such as Councils and public transport providers) in the area.

Yours faithfully



Leader of the Council

Subject:

FW: Letter from Lewes District Green Party

[REDACTED]

To: A27 Arundel Bypass <A27ArundelBypass@highwaysengland.co.uk>

Subject: Letter from Lewes District Green Party

As a parish representative from Lewes on the SDNPA I received the below letter outlining objections to A27 Arundel Bypass.

[REDACTED]

After last night's Lewes and District Green Party Town Councillors meeting, in which I described the proposals put forward by Highways England for an Arundel Bypass, I have been delegated to write to you as you are the elected representative to the South Down National Park to inform you of how LDGP feel and asking you to take our comments to the SDNPA.

Lewes and District Green Party represents over 350 members, and at the meeting held on 22nd October proposals made by Highways England for a bypass around Arundel were considered.

Although Arundel is not in our area, the A27 runs through it, and it was observed that whatever changes occur in one section of the road, a road, by its nature, will carry much of that will impact further along.

LDGP resists the argument that building more, bigger, faster roads is a solution acceptable to the problems of congestion.

Since the report in October 2018 from the Intergovernmental Panel on Climate Change, the responsibility of government bodies must be towards creating imaginative and sustainable systems aimed at the protection of people and species and mitigation of climate chaos.

We believe that none of the options presented are acceptable, as all of them fail to acknowledge the need to make infrastructure suitable for a changing climate.

A move towards reducing carbon output by improving public transport - buses and trains, facilitating local cyclists and walkers and encouraging lower speeds on all roads must be a priority.

Lewes and District Green Party believe that all the options proposed mean that the destruction of irreplaceable habitats, Ancient Woodland, and fragile ecosystems represent unacceptable levels of biodiversity loss which all our efforts should be directed towards protecting.

The Arundel Alternative which is a single carriageway with a 40mph speed limit from Crossbush roundabout to Ford Road Roundabout would be cheaper and far less destructive to the environment.

Highways England is wrong to embark on a 20th Century solution to a 21st Century problem.

Sustainable transport solutions must be prioritised, bigger faster roads are not the answer.

Sent from my iPad

Save the Bees!

Help reverse the decline of bees in the South East and create a haven for pollinators in the South Downs National Park. Support our Bee Lines campaign by visiting www.southdownstrust.org.uk/beelines/ and donate.

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Sent: 22 October 2019 10:05

To: A27 Arundel Bypass <A27ArundelBypass@highwaysengland.co.uk>

Subject: LITTLEHAMPTON TOWN COUNCIL RESPONSE TO THE A27 ARUNDEL BYPASS IMPROVEMENT SCHEME CONSULTATION

Importance: High

LITTLEHAMPTON TOWN COUNCIL RESPONSE TO THE A27 ARUNDEL BYPASS IMPROVEMENT SCHEME CONSULTATION

STATEMENT OF SUPPORT

Littlehampton Town Council strongly supports the principle of creating a bypass for Arundel that links the A27 to the west of the White Swan Hotel with the Crossbush junction to provide the much-needed highways infrastructure to support the large developments in the area. The Town Council previously supported route 5A and due to its close similarity to that option, we restate our support for the revised route 5A, Magenta option. In responding to this consultation, the Town Council also remains sympathetic to the call for a full junction between the A27 Arundel Bypass and Ford Road. In view of the increased pressure on the local highways network generated by the occupation of the new developments at North Littlehampton and the planned construction of the Lyminster Bypass, continuity of the network at this point is also considered an important part of the final scheme.

In developing options for the A27 at Arundel the Town Council wishes to reiterate the following representations.

There is a need to provide a solution to congestion at Crossbush to make sense of the investment in the wider network particularly in relation to the Lyminster Bypass which will be bridged over the railway joining a new link road into Littlehampton. This easier access will be key to attracting investment in our area which is vital to addressing areas of high deprivation in Littlehampton and connectivity to the new developments at North Littlehampton. We understand that the new bypass will connect to the existing Lyminster Road and it is that which will connect into to the new junction at Crossbush. Further consultation on the precise shape of the arrangements connecting the Lyminster Bypass, Lyminster Road and the new junction at Crossbush may therefore be required.

New housing and commercial developments at Ford, West Bank Littlehampton, Clymping and Angmering as outlined in the Arun Local Plan also need an effective A27 immediately and in the future, with proper access, to avoid massive pressure on the A259, which runs right through a residential area of Town, remains single carriageway in parts, with associated air quality and congestion issues. Improved walking, cycling and public transport opportunities between Littlehampton and Arundel which are important to our visitor economy and connectivity with the new development at North Littlehampton.

It is necessary to provide a junction at Ford. The pinch point at the top of Ford Road is completely unsuited to today's conditions, let alone future traffic. It would seem to us that the most efficient way of delivering improvements at this point would be when the bypass is being constructed. Whilst it is thought that significant mitigation measures would be required to ensure that such an enhancement to the Scheme was included, we believe that it is achievable. The District is faced with an unprecedented requirement to deliver huge numbers of new houses and an unsuitable road which already goes through the National Park. Its congested nature already encourages diversions though less suitable roads in the South Downs which could be alleviated by further by the addition of improvements at this point.

The revised option 5A, Magenta route provides the very best route orientation to minimise the impact on the rural environment and its inhabitants. This could also involve the setting up of a visitor centre to enhance access to the countryside.

[Redacted]
Littlehampton Town Council
[Redacted]

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Highways England
Bridge House
Walnut Tree Close
Guildford
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Re: A27 Arundel Bypass Public Consultation

Dear Sirs,

We write in response to the consultation exercise.

Lyminster & Crossbush Parish Councillors have voted in favour of supporting Cyan and Beige options 1V5 and 1V9.

Further to consideration of the consultation evidence we have the following further comments:

1. We are in favour of the online options on the basis of
 - a. least impact on our parish and its residents
 - b. the least impact on the natural environment and specifically the Arun Valley and the South Downs National Park
2. We note that all of the route options entail asset and amenity loss compromises
3. We feel that in the comparative analysis put forward by Highways England there is insufficient consideration of the role of technology in a low carbon economy 30 years from now and the implications on future traffic volume
4. Whilst all options for the Crossbush Junction are largely the same at this stage, one of our principal concerns, is this junction and its future operation. We would welcome early discussion as to the proposed improvements at the next stage of consultation, particularly with a view to future proofing the link roads that will connect into the junction including the proposed Lyminster Bypass. We would also like to take the opportunity to secure a genuine pedestrian/ cycle path to enable a link between Arundel and the coast at Littlehampton.
5. We have received representations from the Parish highlighting a strong preference for the viaduct approach over the proposed embankment for the offline options should one of those routes be the ultimate outcome. **We have serious concerns regarding an embankment across the Arun Valley in terms of visual impact, habitat destruction, flood risk, heritage impact upon the Lyminster Conservation Area, agricultural / grazing land loss and the economic effect upon the agricultural community. It is also our view that the movement of huge volumes of aggregate materials and earthworks would represent a very poor outcome from a sustainability and carbon footprint perspective.**

We would appreciate the opportunity of continuing to be engaged in the consultation process moving forward with specific regard to the matters raised above.

Yours sincerely,

Lyminster & Crossbush Parish Council

Please note correction made to paragraph 4 of Nick Herbert's response to the consultation. ('and' inserted after Binsted). Thank you.

Formal response to Highways England further consultation on the Arundel Bypass

I am strongly in favour of a proper offline, dual carriageway bypass which would deal with congestion at Arundel and take traffic away from the South Downs National Park. As MP for Arundel & South Downs for almost 15 years I have consistently made the case for this, as did both of my predecessors. I campaigned for the bypass to be put back into the roads programme and welcome its inclusion in the Government's national infrastructure programme with funding from RIS1.

A bypass was first proposed in 1985, and was subsequently included in the Government's main roads programme in 1996, only to be shelved by a Labour government in 1997. In this time, we have seen a rise in traffic using the A27, the majority of the route of which is already dualled, including either side of Arundel. The serious bottlenecks at Arundel cause long delays at peak times and encourage traffic to rat-run through the historic town and the South Downs National Park.

Pressures on this road will only increase as more houses are built in West Sussex. Without a bypass there will be 28,000 more vehicles a day through the National Park at Arundel, and 23,000 more vehicles a day through the South Downs. Doing nothing is no longer an option.

My preference is for the Magenta route, which has also been supported by Arundel Town Council, Arun District Council and West Sussex County Council. I regret the impact on some properties in the village of Binsted and on the edge of Walberton, but I believe no other route is viable, that an offline bypass is essential, and that it will be of overall benefit to the South Downs and the National Park.

The Magenta route will reduce traffic in the Park by up to 84 per cent at Arundel and 27 per cent through the Downs. Less than three quarters of a kilometre will go through the South Downs National Park, whereas an online route would go through 2 kilometres of Park. The existing A27 already goes through the Park via the Arundel relief road. An online route would mean a two-thirds increase in traffic going through the Park, whereas Magenta would mean more than a four-fifths decrease.

I am therefore strongly opposed to both the Beige and Cyan routes. An online route would not be a bypass at all. It would sever Arundel unacceptably and affect between 120 and 142 properties – at least four times as many as Magenta. The Beige option would still result in traffic holdups and would not provide sufficient capacity in the long-term.

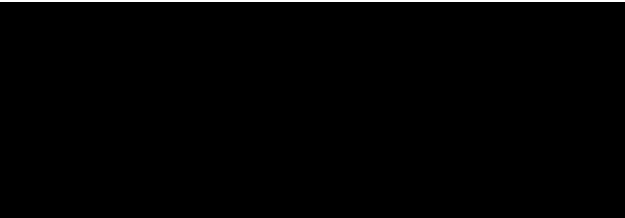
The Grey route would miss the National Park altogether, but it would be the most expensive and affect too many properties at Walberton. Although the Crimson route would affect the fewest number of properties, it would go through more of the National Park and 'ancient' woodland than any other.

A dual carriageway bypass will save commuters using the A27 at Arundel twice a day between an hour and an hour-and-a-half of journey time every week. These are significant time savings.


However, a bypass is not a matter for Arundel or its proximate villages alone; nor will the benefits be confined to residents of the Town and commuters. An offline bypass will effectively be a National Park relief road, reducing traffic in the Park and in downland villages such as Storrington which currently has one of the worst levels of air pollution in the country.

The Arundel bypass is an infrastructure project of national significance. It will be an important step towards the full dualling of the A27 in West Sussex, and it will support economic development in the region. My judgement is that the vast majority of my constituents want an offline bypass and believe that it is long overdue. It should proceed without further delay.

THE RT HON NICK HERBERT CBE MP
MP for Arundel & South Downs
House of Commons
London
SW1A 0AA



Sent on behalf of Nick Herbert by:

 **The Rt Hon Nick Herbert CBE MP**
MP for Arundel & South Downs
House of Commons, London SW1A 0AA


www.nickherbert.com



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Direct line [REDACTED]
Mobile No [REDACTED]
My Ref AB/S.Dons/Slindon
1 October 2019

Highways England
A166 Project Team
BY EMAIL ONLY

Dear Sir or Madam

Consultation on A27 Arundel Bypass Options

Thank you for the opportunity to review the options for the upgrading of the A166 at Arundel in West Sussex which Highways England has been consulting on since the end of August 2019.

The Trust has reviewed the consultation brochure Environmental Assessment Report (EAR) and Interim Scheme Assessment Report (ISAR) which have been published by Highways England. The Trust does not wish to comment on the merits of whether a bypass should be provided at Arundel and neither does it have any comments to make on Option 1, Option 2, Option 3, Option 4 or Option 5 as these options do not have either a direct or indirect impact on the Trust's land ownership in West Sussex.

The Trust has however identified that Option B1 will have a direct impact on the organisation's land which forms part of the Slindon Estate land ownership plan attached. Slindon Estate was given to the National Trust in 1966 by Frederick Cotton Isaacson who bestowed the estate on the condition that it was to be "maintained as far as possible as a Sussex Estate". The Slindon Estate is managed today with this request at the heart of all decision making. The Estate covers an area of approximately 1,000 hectares and includes much of the historic settlement of Slindon at its southern end as well as several historic farmsteads, buildings and structures scattered across the southern slopes of the South Downs. The estate sits at the southern end of the SDNP indeed part of the estate lies outside its boundaries. The estate has a broad range of habitats within it from the arable farmland at the southern end through rolling downland used for grazing with large areas of ancient woodland leading up to the open downland with its sweeping views at Bignor Hill at its northern end. This broad range of habitats supports diverse flora and fauna and this is recognised through a SSSI designation at Duncton/Bignor Escarpment.

National Trust
London and South East
Michelle Constancey Head
Warren Farm Barns
Andover Road
Winchester
Hampshire SO11 1FL
Tel 01903 200090

President HRH The Prince of Wales
Chair of Regional Advisory Board for
London and South East Tim Smyllie
Director for London and South East Nicola Briggs

Registered office
Heelis Kemble Drive Slindon Wiltshire SN0 1NA
Registered charity number 1008000



At this stage it is not clear how much National Trust land could be impacted by the development. Should Option B1 be taken forward the Trust would request that there is early engagement with us by Highways England so that we can fully understand what land may be required and consider potential impacts, mitigation and enhancements.

The Trust has noted that the EAR indicates that survey work for many protected and notable species has not been undertaken for the western end of Option B1 and therefore the Trust would request that should this option be taken forward further survey work is undertaken at the earliest possible opportunity to better understand any impacts on both flora and fauna. The Trust is aware that the area of woodland adjacent to the proposed new carriage way Ashbeds is used by Barbastelle Bats and is a substantial area of oak woodland. It is also highly likely that this area supports dormice given the habitat type. The Trust is concerned that the option proposed has the potential to adversely impact on these protected species during both the construction and operational phase notwithstanding the current dual carriage way in this location.

The existing bridle way linking Slindon Common and Pontell Copse provides a valuable link between the villages of Alberton and Slindon and Option B1 would require its realignment as a result of the new carriage way and alterations to the existing road layout. The Trust considers that this location offers the opportunity for more than just a bridle way bridge and that Highways England should consider the introduction of a green bridge in this location to provide habitat and wildlife connectivity between the areas to the north and south of the potential new carriage way and that this could enable biodiversity enhancement as part of the proposal. The Trust would encourage Highways England to look at other opportunities for the introduction of such measures as part of any final proposal to ensure that severance is not only reduced but that there is clear enhancement along the full length of any route.

The Trust hopes that these comments can be taken into consideration as part of the review of consultation responses and should any additional information or clarification be required please do not hesitate to contact me.

Yours faithfully



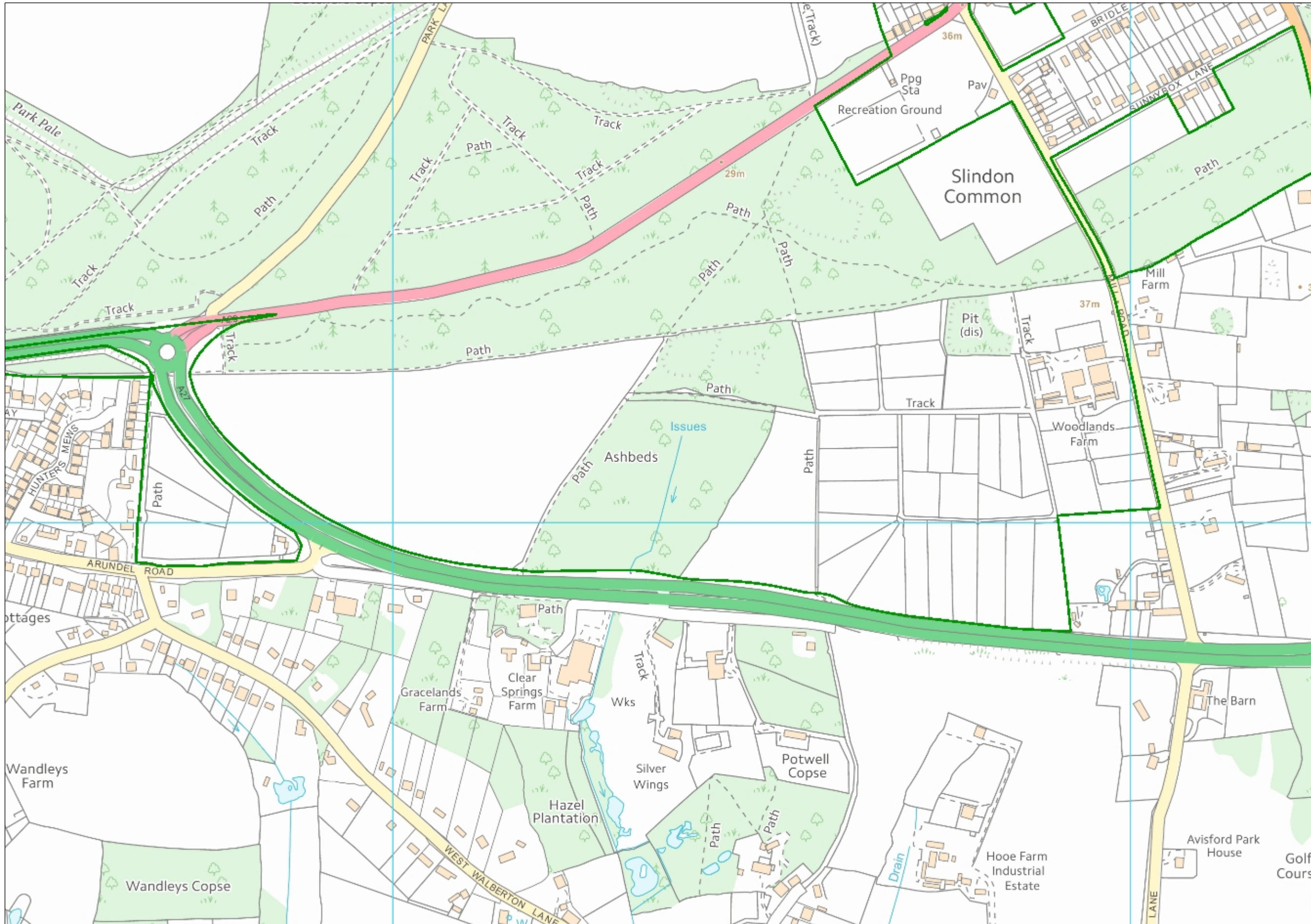
Planning Adviser

Cont/d

□



National Trust Land Ownership in Proximity to Option 5BV1



- Legend**
- NT Ownership (GB)
 - NT Leasehold (GB)

N



Scale 1:5,000

0.25 0 0.13 0.25 Kilometers

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Notes

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Date ☐ ☐☐ October ☐☐19



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BY EMAIL ONLY

A27 Arundel Bypass Public Consultation

Natural England welcomes the opportunity to provide our advice on the route options included for the A☐☐ Arundel Bypass. Our comments pertain to Landscape and Biodiversity impacts of the ☐ario☐s options.

Overview

We welcome the fact that online options are again included for consideration in the options appraisal for the Arundel Bypass. The location of this scheme which is both directly ☐ithin☐ and ☐ithin the setting of the South Downs National Park is of national importance for wildlife and landscape. It contains a site of priority and irreplaceable habitats which support an outstanding assemblage of species including rare and notable species. The area has been identified as of national/international importance for bats which indicates the quality and permeability of this exceptional landscape. The loss of and deterioration of these habitats presented by the options is of considerable concern to Natural England we therefore welcome Highways England's decision to reconsider less damaging online options in this new public consultation.

Natural England considers that online routes offer the greatest opportunity for addressing the environmental impacts and to reduce the currently forecasted impacts of this complex scheme. The reduced costs of online options present an opportunity for an exemplar approach befitting this special landscape and its cultural heritage.

We have advised Highways England that the impacts on wildlife and landscape are considerably greater with offline schemes. This is because offline schemes include both habitat loss and the permanent severance of remaining habitats affecting the resilience and functionality of this extraordinary ecosystem and diminishing its ability to adapt to the effects of climate change. Furthermore our landscape advice remains that the online schemes offer the potential for the least damaging scheme in terms of landscape character and visual amenity.

We have advised that in order to ensure a robust assessment of the impacts of severance the critical factor is to assess each option in an integrated way at a landscape scale. We have provided Highways England with a joint letter from Natural England the South Downs National Park Environment Agency and the Forestry Commission appended to this letter presenting our united concerns of which severance is an overarching theme.

It is with concern therefore that we advise that the impact of severance has not yet been adequately assessed in the brochure or accompanying supporting evidence. With a clear and balanced assessment which highlights this major impact a judgement of the true scale of environmental

impact presented by offline options cannot be made. We look forward to continuing to work with Highways England to address this.

This letter highlights our considerable concerns regarding landscape and the impacts that the options have for biodiversity, a loss and severance of habitats. We will reiterate our advice that this area is extraordinary necessitating a bespoke approach to assessment across the site of priority and irreplaceable habitats and the associated array of species that this nationally important environment contains.

Landscape and Visual advice

The location of the proposed options for the scheme lie within and in the setting of the South Downs National Park (SDNP). The landscape within which the scheme is proposed is of national importance and exceptional quality. All the route options run through a group of local Landscape Character Areas some of which straddle the park boundary. These landscapes and their component features combine to create an intricate and special landscape which gives this location its unique sense of place and helps to define the natural beauty of the area.

Our review of the information and evidence presented in the Environmental Assessment Reports and Interim Scheme Assessment Reports leads us to the conclusion that little to no consideration has been given as to how the design principals for the scheme will seek to moderate the most adverse impacts to an acceptable level, deliver high environmental standards and provide for environmental enhancements. These are requirements of national planning policy for schemes located within designated landscapes whilst for schemes located within the setting of such designations they should be designed with sensitivity in order not to compromise the purposes of the designation.

Due to the site scale and limitations of the scheme for all of the route options proposed Natural England advises that the scheme will have a significant adverse impacts on the special qualities of the National Park and its setting. All the route options presented will have a significant adverse effect on the valued landscape character and visual amenity afforded by the natural beauty of this place. All route options will result in the direct loss key landscape features, the severance of others e.g. hedgerows, ancient woodland blocks which contribute to the special qualities of the national park. The statutory purposes of the national park will therefore be adversely effected.

National Planning Policy

The National Policy Statement (NPS) for National Networks sets out the tests by which proposals which fall within the boundary and setting of a designated landscape are judged (para 1.1 – 1.1.1). In Table 1.1 of the report, selected text from para. 1.1 has been included. Para. 1.1 refers to the setting of the designation. The relevant paragraph for the policy test for proposals which lie within a designated landscape therefore all options accept the Grey route is contained within Para 1.1. The policy is clear in its intent.

*‘There is a strong presumption against any significant road widening or the building of new roads and strategic rail freight interchanges in a National Park, the Broads and Areas of Outstanding Natural Beauty, unless it can be shown there are compelling reasons for the new or enhanced capacity and with any benefits outweighing the costs **very significantly**. Planning of the Strategic Road Network should encourage routes that avoid National Parks, the Broads and Areas of Outstanding Natural Beauty’.*

Para 1.1 goes on to state

‘Where consent is given in these areas (designated landscapes) the Secretary of State should be satisfied that the applicant has ensured that the project will be carried out to high environmental standards and where possible includes measures to enhance other aspects of the environment. Where necessary, the Secretary of State should consider the imposition of appropriate requirements to ensure these standards are delivered’.

The NPS therefore sets very high tests both in terms of cost benefits and the environmental standards which are inherent within the schemes overall design which such schemes have to pass

prior to the granting of approval by the Secretary of State. In addition other measures intended to enhance other aspects of the environment should be included where these are possible.

We note that table 11 includes extracts from the NPPF 2018. Although a material consideration this is not the relevant policy by which the scheme will be determined. The tests set out in the NPPF at para. 11 are also contained in the NPS at para. 111. We note the reference to 'exceptional circumstances' and the need for project proposal to demonstrate this as well as the need for such schemes to assess the extent to which detrimental aspects on the host designated landscape can be moderated.

The NPS also requires a scheme to be of 'good design'. Para. 118 states 'Applicants should include design as an integral consideration from the outset of a proposal'.

Whilst para. 119 states

'Visual appearance should be a key factor in considering the design of new infrastructure, as well as functionality, fitness for purpose, sustainability and cost. Applying "good design" to national network projects should therefore produce sustainable infrastructure sensitive to place, efficient in the use of natural resources and energy used in their construction, matched by an appearance that demonstrates good aesthetics as far as possible'.

Statutory Purpose of the South Downs National Park

The prime statutory purpose of the SDNP is the conservation and enhancement of the natural beauty of the designation. Natural beauty manifests itself differently in each National Park and AONB and is often expressed in terms of the special qualities of the designation. These frequently take the form of statements or descriptions and are clearly set out in the designation's Management Plan. The special qualities in total for the SDNP are set out in the latest Management Plan 2010 – 2019 on page 11 and in greater detail on the website¹.

The AEE Environmental Assessment Report makes reference to them at 11.1. Whilst further references are made within the text describing the landscape character areas affected by the scheme options. Chapter 1 section 1.1.1 page 11 sets out how the methodology assess the significance of the effect of the scheme on these special qualities. This is essentially based upon the DMRB process supplemented with professional judgement.

Natural England wishes to see a narrative judgement provided which provides sufficient evidence to fully explain both the nature and significance of the effect of all route options on these special qualities. The assessment should draw upon the conclusions of the LIA and clearly state which landscape character areas and which visual receptor groups are affected. The assessment should be done as soon as is possible in order that the conclusions are available to inform the route selection process and design principals for the scheme.

At 1.1.1 the text states that *'the outcomes of the SDNP special qualities assessments will be provided to the SDNP Authority for its consideration'*. Natural England is the Government's statutory adviser for landscapes and a statutory committee for NSIPs. Consequently we expect the outcomes of the assessment to provide to us for comment as well.

Scheme Design Principals

In order to pass the policy tests set out in NPS National Network the design of the scheme needs to be of 'high environmental standards' and 'where possible includes measures to enhance other aspects of the environment'.

We note that 2 of scheme's 7 objectives relate to the environmental setting of scheme. These are

6. *Deliver a scheme that minimises environmental impacts and seeks to protect and enhance the quality of the surrounding environment through its high-quality design'*
7. *Respect the South Downs National Park and its special qualities in our decision-making'.*

Whilst the scheme is not yet at a detailed design stage there are a number of design principals

¹ <http://www.southdowns.gov.uk/discover/why-are-we-a-national-park/>

² <https://highwaysengland.citizenspace.com/he/a27-arundel-bypass-further-consultation/>

which can be adopted now to define the overarching design approach for both option selection process and detailed design stage. This would greatly assist in the realisation of the scheme's objectives. For A417 'Missing Link' scheme (located wholly within the Cotswolds Area of Outstanding Natural Beauty) HE are committed to delivering a landscape-led scheme. The Preliminary Environmental Information Report for this scheme at [redacted] Scheme Design Principles p.1 [redacted] states [redacted]

'Landscape is a primary consideration in every design decision. The landscape led approach for the proposed scheme is to sensitively integrate the proposed scheme into this nationally important AONB landscape, looking to ensure that the proposed scheme is designed to 'meet the character of the landscape' and reduce negative impacts of the proposed scheme on the surrounding environment. The scheme vision aims to maximise opportunities for landscape, historic and natural environment enhancements within the Cotswolds AONB. The scheme vision would look to improve landscape and ecological connectivity through landscape and habitat restoration and creation including measures to enhance local communities' quality of life and visitors' enjoyment of the area'.

Natural England wishes to know why such an approach has not adopted for the A100 Arundel Bypass scheme. In particular how respect for the SDNP will manifest itself in the route selection process and final scheme design.

Natural England advises that as with the A100 Highways England adopts the same approach to design for the A100 Arundel Bypass scheme. The environmental impact and national importance of the location of this scheme is at least equal to that of the A100 and Natural England sees no reason why the same design principals should not be applied. Such an approach would help steer the final design so that it realises the aspirations of the Road Investment Strategy to deliver schemes that will be "trail-blazers for the future". And ensures that the policy tests set out in the NPS for National Networks are passed and the objectives for the scheme 'high-quality design' are realised.

Scheme Design as set out in the Environmental Assessment Report

In the previous iterations and associated consultations for the scheme Natural England has provided clear advice as to our preferred route option. This advice has not changed. Our preferred route option i.e. the least worst option [redacted] in terms damage to landscape character and visual amenity is 100 and 109. To repeat our reasoning both of these options minimise the direct effects within the SDNP and therefore best fulfil policy as set out in the NPS i.e. the 'strong presumption against any significant road widening or the building of new roads...in a National Park...' Although option 101 also fulfils this policy requirement this option has a far greater impact on the setting of the SDNP and thereby fails the policy requirement to 'avoid compromising the purposes of the designation' [redacted] NPS para. 1.1000. Although options 100 and 109 also fail this test they do so to a lesser extent in that the location of the proposed embankment / roadcut is closer to Arundel in a position of the Upper Arun Valley which is already in part characterised by transport infrastructure and urban development. As a consequence the setting of the SDNP particularly refers to Arundel Castle from the lower Arun Valley would be compromised to a lesser extent by options 100 and 109.

In undertaking the option selection process Natural England advises that Highways England should pay close regard to the policy tests contained in the NPS and clearly set out how the scheme's design principals will address these. Elements of the scheme's design principals, particularly the embedded design elements which specifically address the need for 'high environmental standards' and 'measures to enhance other aspects of the environment' should be clearly set out. In addition the NPS requirement for good design visual appearance and sensitivity to place para. 1.808 should also be accounted for.

From our review of the Environmental Assessment Report Natural England fails to understand how the tests in the NPS have been addressed within the scheme's design principals. None of the

³ https://highwaysengland.citizenspace.com/he/a417-missing-link-public-consultation/supporting_documents/Preliminary%20Environmental%20Information%20Report.pdf

supporting material including the flythrough videos show any form of mitigation measure or embedded design feature which seek to deliver these policy requirements. For instance the information including the flythrough videos makes reference to the potential to provide a viaduct over the River Aron and its flood plain. However the 'possible viaduct variant' would use of Designated Funds. Designated Funds are not a part of the funding for this scheme they would be outside of the budget allocated to the DCO. The 'possible' viaduct would not be embedded within the design of the scheme and would be subject of a successful bid to the Designated Funds budget. Natural England does not consider this to be an appropriate means to fulfil NPS policy requirements. We set out below our reasoning and advise that the only opportunity to reduce the scale of the adverse effect on the setting of the SDNP for all route options would be through the use of a viaduct.

All route options presented for the scheme include an embankment and the 'possible viaduct variant'. The Defra Single Voice statement on this issue dated 17 July 2019 sets out why we consider the viaduct option to be an essential design element of the scheme. Natural England reiterates the following: an embankment will permanently sever the floodplain of the River Aron and sever Arandel from its lower valley setting resulting in significant adverse effects on valued landscape character, visual amenity and cultural heritage. The lower valley of the River Aron from Arandel downstream to Ford is a key component on the setting of the SDNP with the uninterrupted views available from this location to Arandel and the downs beyond. These views allow people outside of the national park to enjoy the natural beauty afforded by it. The introduction of an embankment into this landscape would completely alter its character and become the dominant feature within the lower Aron valley.

Although a viaduct has the potential to be a more sympathetic presence in the landscape by providing a more porous visual effect as opposed to a solid barrier such as an embankment a viaduct in itself not would provide sufficient mitigation to negate the harm caused by an embankment. Such a structure would still have a detrimental effect it would simply be a least worst option and not itself constitute good design. Good design could only be achieved if the design of the structure was sympathetic to location and character of the area had a clear design objective to minimise both its scale and dominance in the landscape and sought to maintain a visual link between Arandel and the lower Aron valley. As depicted in the flythrough videos the structures shown do not enhance the proposals in either landscape or visual terms.

In order fulfil the policy test set out at 5.154, 'to avoid comprising the purposes of these areas (designated landscape)' and the need for sensitive design Highway England needs to give urgent consideration to both ensuring that a viaduct is a part of the scheme's design principals i.e. it is embedded mitigation but also of a design which is sympathetic to character and intervisibility of the lower Aron valley.

At point 8.1.1 in the SAR Highway England have assessed the comparable environmental impacts of a viaduct versus an embankment and state that that there is no difference in impacts between the two options. Natural England does not agree with this assessment for the reasons set out above.

We also note for all the overbridges depicted in the flythrough videos no attempt has been made to either design them sympathetically or provide for other environmental enhancements. In addition opportunities for landscape and ecology connectivity through the provision of green bridges unlike for the A1 scheme has not been taken. Whilst it is accepted that detailed design for the scheme will only commence once the route selection process has been completed that does not prevent Highway England committing to these design principals now and at least indicatively illustrating in the flythrough videos what such structures could look like or might be located.

Landscape and Visual Impact Assessment Methodology and conclusions

We consider that there are significant shortcomings in the Landscape and Visual Impact Assessment (LVIA) methodology. Natural England is concerned that the LVIA methodology as currently defined underestimates the likely landscape and visual impacts of the scheme on landscape and visual receptors and fails to relate how these effects would affect the special

qualities of the SDNP. It is of critical importance that the LIA provides robust evidence on the likely significant effects resulting from the scheme on the statutory purposes of the SDNP in order that the Secretary of State can make a fully informed decision.

Robust evidence allows for confident conclusions from which suitable mitigation measures and other environmental enhancements can be developed. We acknowledge that the scheme design is not yet fully realised but for the reasons provided above we have serious concerns about the likely effect of the scheme on the SDNP and its setting. The degree to which these effects can be moderated – the feasibility and efficacy of embedded design elements to reduce this severity of effects and the appropriateness of mitigation measures all need to be informed by robust LIA evidence.

We have a number of concerns about some of the aspects of the LIA methodology and provide a few of these below as examples.

1. Natural England disagrees that all users of surrounding public rights of way located outside of the National Park in non-designated landscapes are of medium sensitivity as cited in the LIA section 4.4.4. We advise that for users of the PRO located on the western bank of the River Aron who are benefiting from the visual amenity of views towards the SDNP – Arundel Castel and the Down beyond – their sensitivity should be high. As highlighted in the LIA highlights

‘Of particular importance are the views in a northerly direction from many positions across the floodplain, taking in the dramatic silhouettes of Arundel Castle and Arundel Cathedral, which rise imposingly from the edge of the South Downs forming an iconic view’.

As already outlined Natural England advises that the offline route options effectively sever Arundel from its valley and would significantly change the experience of the views for users of this footpath. Furthermore this iconic view has not been adequately represented by a series of viewpoints providing evidence of the experience of the walk along this valley.

- The LIA shows that the proposals will have a direct effect upon
 - LCA – Fontwell Upper Coastal Plain
 - LCA – Lower Aron valley
 - LCA – Arundel
 - LCA1 – western Downs

However the report assesses the Fontwell Upper Coastal Plain LCA as having a medium sensitivity. We disagree with this classification and advise that the sensitivity should be high as this LCA lies within the SDNP. GLIA guidelines categorises land within designated landscapes as having a high sensitivity. We therefore question the classification in the LIA particularly given the impact through the direct loss of landscape features and valued character the offline options would cause. This LCA encompasses a suite of landscape features and interconnected habitat types. The construction of the road would delimitate these and remove the tranquil and secluded nature of this landscape.

Biodiversity advice

It is clear that this environment is of exceptional importance for biodiversity. The survey work highlights this as an area that contains a suite of key priority and irreplaceable habitats and species. These long established networks and associations have persisted in an environment which notably is largely undeveloped and highly varied in nature. The interconnected nature of this environment is reflected in the presence of an outstanding assemblage of species. The presence of maternity roosts of rare bats including Barbastelle lechsteins and the alcathe bat is one of both of particular note and of concern to Natural England as it demonstrates the exceptional importance of this environment and the need for its protection.

Environmental Assessment Report (EAR)-Summary of Concerns

We are very concerned that the EAR currently presents a highly unclear assessment of impact and we advise that this is revised as a matter of urgency. This is of great concern to Natural England. We have consistently advised that a tailored landscape scale assessment is required in order to demonstrate with confidence that any proposed mitigation is fit for purpose. This scale of assessment is critical in order to appraise the options and impacts with confidence. The South Downs National Park Environment Agency Forestry Commission and Natural England have referred to the need to provide a landscape scale assessment in our single voice letter as follows

As an overarching principle we have advised that any option for the bypass should be considered in an integrated way at a landscape scale. This will ensure that impacts on a complex and interconnected ecosystem, set within a wider hydrological catchment, are fully understood alongside any impacts on the historic landscape

It is essential that landscape, biodiversity, hydrology and cultural heritage are considered together in an environmental masterplan in order to appropriately address severance and resilience and to avoid the potential for addressing one issue to the detriment of another

It not however clear how this advice has been addressed. The EAR includes an assessment of individual habitats and their importance which we wish to provide comments on but an integrated appraisal of the functionality of the area and how each option would affect it has not been included. The assessment of severance appears only as a description and in tabulated form and not for all habitats or species. This present's unclear and misleading information regarding this issue which we have advised is of critical importance for this scheme. With this information presented in an integrated comparative way at the appropriate landscape level we advise that the true impact of the Arundel Bypass cannot be assessed and therefore cannot be relied upon to provide a reliable assessment of alternatives for the Preferred Option. To highlight this when judging environmental impact the online options appear to be more damaging than offline schemes. We advise that this is because the integrated approach addressing functionality has not been included.

At present it is difficult to gauge the level of loss and deterioration of ancient woodland for example. Of further concern is that the Report currently provides a number of statements which are incorrect (see below) and misleading. We wish to question the significance criteria and discussion regarding the significance of severance (below)

We have advised that the applicants follow the mitigation hierarchy (see below) when appraising the impacts of each scheme option and in the absence of the required level of assessment of impact this cannot be achieved.

Furthermore the accompanying brochure provides misleading information as it presents only impacts to woodland and not the impacts of severance and the impacts of other key priority habitats which offline options could sever and remove.

It is essential that a balanced assessment is included to ensure that in an environment such as this the avoidance of one priority or irreplaceable habitat for example does not detriment another and that the resilience of this special environment is maintained. We welcome the radio tracking surveys which have been conducted for bats. These highlight the permeability of this landscape rich in opportunities for roosting and foraging. It is of critical importance that this permeability is maintained and that Highways England can demonstrate that they have followed the mitigation hierarchy to ensure that the least damaging option is chosen.

Mitigation Hierarchy

We have advised that Highways England demonstrates that the option with the least environmental impact is pursued. In order to achieve this Highways England must ensure they have followed the mitigation hierarchy when appraising each route option and to do this the evidence base must

include a landscape-scale assessment.

The mitigation hierarchy is a key principle of sustainable development is embedded in the National Network NPS which states that

5.25 As a general principle, and subject to the specific policies below, development should avoid significant harm to biodiversity and geological conservation interests, including through mitigation and consideration of reasonable alternatives.

Where significant harm cannot be avoided or mitigated, as a last resort, appropriate compensation measures should be sought.

In order to clarify our concern with the information provided Natural England wishes to provide a few examples below:

Ancient Woodland.

As you are aware ancient woodland is an irreplaceable habitat which once lost cannot be recreated. The wildlife contained within this habitat has established over centuries producing a diverse and rich array species. We have advised that the Arundel Bypass demonstrates how the loss of this irreplaceable habitat can be avoided.

It is of concern that the EAR report does include a summary showing losses of and indirect impacts to habitats. It is not clear how much of this irreplaceable habitat is affected by the options.

Furthermore to demonstrate compliance with the strong policy protection afforded to irreplaceable habitats we advise Highways England explore opportunities to reduce ancient woodland loss.

The NPPF provides robust protection for ancient woodland as follows

11.11 “development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused unless there are wholly exceptional reasons (footnote 8) and a suitable compensation strategy exists”.

Furthermore Paragraph 11.12 of the NPS provides strong protection to ancient woodland as follows

Ancient woodland is a valuable biodiversity resource both for its diversity of species and for its longevity as woodland. Once lost it cannot be recreated. The Secretary of State should not grant development consent for any development that would result in the loss or deterioration of irreplaceable habitats including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the national need for and benefits of the development, in that location, clearly outweigh the loss. Aged or veteran trees found outside ancient woodland are also particularly valuable for biodiversity and their loss should be avoided.⁷⁹ Where such trees would be affected by development proposals, the applicant should set out proposals for their conservation or, where their loss is unavoidable, the reasons for this

We further advise that at present a reflection of the options with regard to the *deterioration of irreplaceable habitats* is yet to be made as the impacts of severance have not been accurately assessed please see severance assessment below

Veteran Trees

Natural England does not agree with the EAR with regard to veteran trees. It is unclear why 8.11.11 states that *ancient or veteran trees isolated from a habitat complex containing other ancient or veteran trees are less likely to be of such high importance and are classified as being of County Importance*. The assessment has segregated veteran trees into categories according to the habitat or situation in which they are found. We advise that veteran trees are of national importance irrespective of whether they form part of an ancient woodland, a cluster of veteran trees or isolated. Natural England is concerned that this assessment incorrectly diminishes the significance of individual trees and that any associated assessment of impact will be unreliable.

In reference to this Natural England would refer you to 1.1 of the NPS National Networks which states

Aged or veteran trees found outside ancient woodland are also particularly valuable for biodiversity and their loss should be avoided.⁷⁹ Where such trees would be affected by development proposals, the applicant should set out proposals for their conservation or, where their loss is unavoidable, the reasons for this.

We advise that the EAR is clearly contrary to this.

With further regard to veteran trees we would be grateful for clarity regarding the numbers of veteran trees affected by each options. It appears that offline options affect either directly or indirectly numerous veteran trees but this is not reflected in the numbers presented in the impact table. We refer you to the consultation brochure which clearly shows a large number of veteran trees in the vicinity of the offline options. It is not clear therefore how the assessment of 1/10 trees lost can be substantiated from the information provided.

Net Woodland

Again we wish clarification regarding the assessment of Net Woodland which segregates importance according to whether it is isolated or part of an ancient woodland. The assessment states that Net Woodland should be classed as

National where also part of ancient woodland

County where isolated/non-ancient woodland

Net Woodland is a priority habitat regardless of whether it is part of an ancient woodland. It is also unclear from the assessment which option affects Net Woodland as the summary results differ from table 8.

Orchard

We note that option 1/1A1A affects this habitat but that little information is included regarding this. Furthermore impacts on Binsted Rife and Tortington Rife require further assessment as offline options have the potential to affect these both directly via habitat loss and indirectly via pollution to aquatic systems an associated habitats of biodiversity value.

Evaluation of severance

We have advised that the impact of severance and therefore of each option's impact on the future resilience of this special landscape is of critical importance. It is concerning therefore that the evaluation of the severing impact of schemes has been consistently erroneously assessed or not included. Again in order to clarify this we include the following examples
It is unclear how the following summary conclusion has been made with regard to woodland severance

1V5 and 1V9 would result in a Large Adverse significance of effect. Option 4/5AV1 would result in a Moderate Adverse significance of effect, as small areas of ancient woodland would be removed from the edge of woodlands with little severance occurring.

We strongly disagree with this assessment. Option 1/1A1A severs the entire woodland complex from surrounding habitats. Natural England advises that severance here is severe. The road would clearly isolate the woodland and impact functionality. We would welcome clarification on how this conclusion was reached.

Of further note is the following with regard to woodland

Option 1V5, Option 1V9 will affect habitats along the northern edge, whereas Option 4/5AV1 will

affect habitats along the southern edge of the LWS. These impacts are regarded as resulting in Large Adverse significance of effects as they are unlikely to completely undermine the integrity of the woodland ecosystem in the LWS.

We advise that online options 100 and 109 affect woodland edge habitats in which a degree of severance by the A100 already exists. Option 100/A1 however. Introduces an additional impact to the south if the woodland complex. It is therefore inappropriate to judge these different impacts as equal with regard to severance.

A similar statement has been made in the decision on woodland HPI which has assessed Option 100 and Option 109 *Large Adverse* and Option 101 and Option 105AV1 *will have the lowest significance of effect (Slight Adverse) as small areas of deciduous woodland on the edge of woodlands will be affected which is unlikely to undermine the function of this habitat type.*

Again we would be grateful for clarification here as online options are given a higher level of impact regardless of the fact that they also impact woodland edge.

It is also unclear how the following conclusion regarding impacts to bats have been reached. *Option 5BV1 is more distant from core foraging and roosting locations used by woodland bats.*

We advise that all offline options present significant impacts regarding severance and loss of habitat which are of great concern to Natural England. The bats have been shown to use this area in a dynamic way and are clearly foraging over this area as a whole. Severance impacts are of key importance for these species. Please see specific comments regarding bats and mitigation.

The above examples highlight the need to provide of the existing functionality via losses and severance habitats and how each option would affect this. This should not be done by habitat but in an integrated way considering the future resilience of this ecosystem in the round.

We have advised that Highways England demonstrates a *betterment* on the existing environment with regard to severance and that online options provide opportunities for this due to their reduced cost impact and location.

The EAR However does not pay due regard for mitigation by way of wildlife crossings for example for online options. Although the impact of severance is significantly less with online options it remains a factor. Furthermore we would remind Highways England of the requirement in the NPS as follows:

5.36 opportunities will be taken to enhance existing habitats and, where practicable, to create new habitats of value within the site landscaping proposals, for example through techniques such as the 'greening' of existing network crossing points, the use of green bridges and the habitat improvement of the network verge

100 Development proposals potentially provide many opportunities for building in beneficial biodiversity or geological features as part of good design.⁸⁰ When considering proposals, the Secretary of State should consider whether the applicant has maximised such opportunities in and around developments. The Secretary of State may use requirements or planning obligations where appropriate in order to ensure that such beneficial features are delivered. Furthermore the NPS developments to be designed and landscaped to provide green corridors and minimise habitat fragmentation where reasonable.

Hedgerows

The key function of a hedgerows in providing networks of habitat for a wealth of species has not been acknowledged and as such their key importance in the functionality of the landscape has not been reflected.

Field habitats

With regard to biodiversity, permeance of the ditch systems and the species within will be far greater with an embankment than a diadict option. A diadict would allow for a more permeable aquatic system. Furthermore permeance of the floodplain will have significant implications for its function as flood storage. With regard to flood storage we advise that the advice of the Environment Agency is fully accounted for. The impact of permeance is also far greater in landscape and visual terms with an embanked option than with a diadict. We have cited this in our landscape comments and in our single voice statement.

Biodiversity Net Gain and Natural Capital

We welcome that the assessment includes biodiversity net gain and we would welcome the opportunity to work with Highways England on this matter. Until level of impact to biodiversity is clear the requirements to achieve net gain will be inaccurate.

The NPPF includes strong policy provision for net gain as follows:

100d *Planning policies and decisions should contribute to and enhance the natural and local environment by "minimising impacts on and providing net gains for biodiversity"*

We have advised that a Natural Capital approach to assessment is undertaken for this scheme and would refer you to the requirements of the Government's 25 Year Environment Plan with regard to biodiversity net gain and Natural Capital.

We again refer you to the NPS as follows:

5.23 The applicant should show how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests.

The scheme is located in an environment of outstanding importance biodiversity. The importance of this must be reflected in robust, bespoke and innovative mitigation. We have advised that in order to achieve the required landscape scale approach to mitigation an environmental masterplanning approach must be adopted.

We advise that the risk of mitigation efficacy is highlighted. For example the efficacy of wildlife crossings (see also below) is widely debated and far from certain (please see bats and mitigation) We therefore advise that this significant risk is given due weight in the review of mitigation complexity.

Bats and mitigation

Again we advise that in line with the mitigation hierarchy of 'avoid, mitigate, compensate' the applicant ensures that the option with the least environmental impact is pursued. In order to demonstrate this we have previously advised that the nature of the proposals in this complex and interconnected ecosystem will require an integrated landscape scale assessment of impact. This scale of assessment is critical in order to appraise each option and its impact.

The woodland is known to contain maternity roosts for two 'Annex II' species of bat (barbastelle and bechstein's) and also of an 'Annex IV' species which is currently considered to be extremely rare in England - the alcahloe bat. The presence of maternity roosts for these rare bat species is of exceptional significance and together with the wider bat species assemblage indicates the landscape as being of the highest quality. Notwithstanding their inherent ecological value the mosaic of long-established ghyll and shaft woodland meadows and riparian habitats represent crucial supporting habitats for these species. It is highly likely that these interconnected habitats are used in their entirety by all bat species present for roosting, commuting and feeding and potentially for foraging and/or hibernation. The potential impact of permeance of these habitats for bat species therefore clearly requires particular consideration to ensure that the species present are not adversely affected by the proposals.

Natural England therefore has significant concerns regarding the proposals set out by Highways England in particular those relating to the offline routes which deviate from the existing carriage way. The potential impacts to bats from the offline road options with regards to barrier effects, collision mortality, habitat fragmentation and edge effects are considerable and present a

significant concern to Natural England. There is currently no evidence to show that mitigation measures aimed at increasing road permeability and reducing mortality to maintain bat populations close to roads work successfully and only limited evidence of the success of certain crossing structures such as underpasses or green bridges (Berthinsen et al 2011). These concerns are exacerbated by uncertainties surrounding the ecology of the rare bat species concerned – in particular the albatross bat which has only been discovered in England relatively recently and its ecology is not yet well understood. There are no systematically collected data on the flight and road crossing behaviour of this species but they are found as road casualties on roads that cut through forest habitat in Europe (Dietz and Kiefer 2011). It is presumed that they are highly sensitive to habitat fragmentation given they exist in small local populations and have restricted ecological requirements and therefore would be severely impacted by the offline options alongside bechstein's. In light of this Natural England would be required to adopt the Precautionary Principle to a high regard when considering any licence application for this species in particular.

It is therefore unclear how the required level of confidence in the efficacy of avoidance/mitigation and/or compensation measures can be demonstrated given the clear significance of this area and the lack of clear evidence to support such measures. Natural England would be unable to satisfy the Fabricable Conservation Status test as part of its licensing duty unless sufficient evidence can be provided to demonstrate that the identified impacts to bats from route options could be successfully mitigated for. Based on the current evidence it is questionable whether the offline options are licensable.

We urge Highways England to pursue the option with the least damaging impact to the bat species present.


Conclusion

Natural England advises that at present the supporting information pertaining to biodiversity and Landscape is unclear and incomplete and does not provide a full and accurate appraisal of the considerable environmental impacts of the Arundel Bypass. Again we welcome that less damaging online options are included for consideration but we are concerned that the assessment does reflect their less damaging impact and potential for mitigation – in particular with regard to severance. We advise that a clear comparative and integrated assessment is currently lacking and therefore a robust appraisal of the options is not possible from the information provided.

Our overarching advice remains that in order for Highways England to deliver a viable road scheme that fulfils the policy and legal protection afforded to Landscape and Biodiversity and the requirements of the mitigation hierarchy, you must demonstrably minimise impacts. In order to do this a landscape-scale integrated assessment is required to accurately assess impacts and provide the level of confidence and quality that *will be required* regarding mitigation of impact in this highly complex nationally important environment. We welcome the opportunity to continue to work closely with you to provide our advice on these critical matters.

Please do not hesitate to contact me should you wish to discuss this matter in more detail.

Yours sincerely


Senior Adviser
Natural England
Kent and Sussex Team

References

Berthinsen A., Richardson O.C., Altringham D. 2011. Bat conservation – global evidence for the effects of interventions. Pelagic Publishing Ltd.
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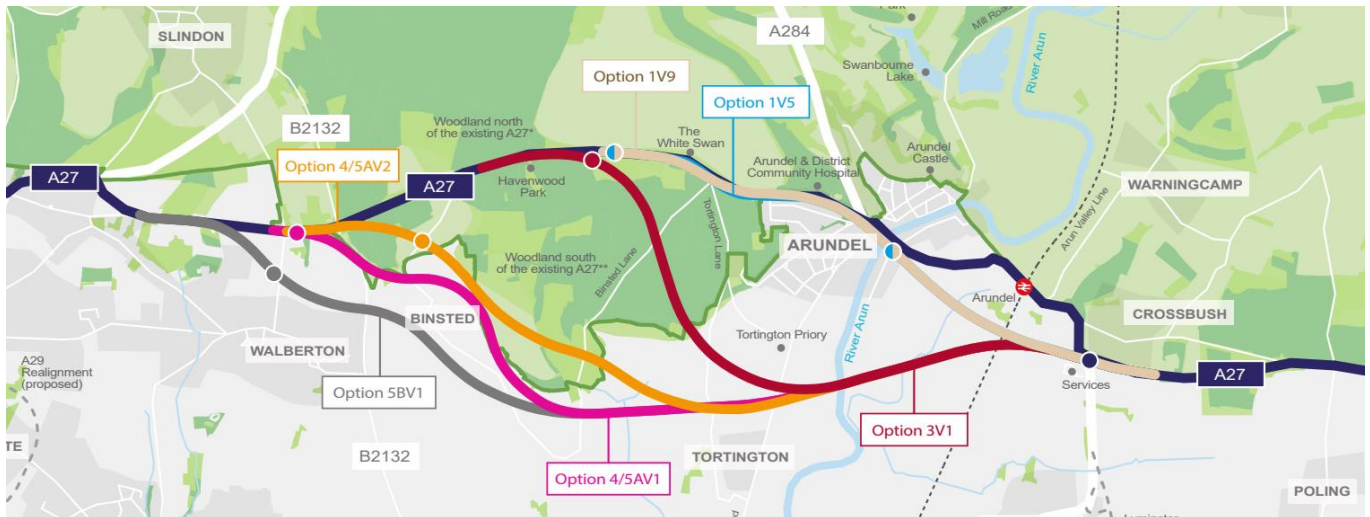
Representations to the A27 Arundel Bypass Further Consultation

Prepared for

The Norfolk Estate

Prepared by

Savills  Limited
74 High Street, Sevenoaks, TN13 1JR



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Appendices

Appendix 1. Completed Consultation Form

Appendix 2. Highways Report

Appendix 3. Heritage Report

Appendix 4. Air Quality Report

Appendix 5. Noise Report



1. Executive Summary

- 1.1. This representation is provided in response to the Further Consultation undertaken by Highways England in relation to the proposed A27 Arundel Bypass which closes on the 10th October 2019. The representation is submitted on behalf of The Norfolk Estate (hereafter referred to as The Estate).
- 1.2. Highways England are currently considering routes for the A27 Arundel Bypass two of which largely follow the existing route of the A27 through Arundel (Cyan 1000 and Beige 1090) four of which would create a new longer bypass around the town (Crimson 1001, Magenta 1001, Amber 1001 and Grey 1001). The purpose of the Further Consultation is to gain views on the proposed routes to inform the route that Highways England ultimately take forward.
- 1.3. The Secretary of State (SoS) is required to assess the scheme that Highways England choose to take forward under the National Networks National Policy Statement (NPS).
- 1.4. In addition to Savills The Estate has commissioned a number of technical consultants to review elements of the evidence base that the Estate consider to be of particular relevance to the proposed bypass to inform the Estate's view as to which route should be taken forward as the preferred route.
- 1.5. Having reviewed all of the proposed routes, the Consultation material and the various technical reports produced for The Estate, The Estate are of the view that the Magenta 1001 route should be taken forward by Highways England as the preferred route.
- 1.6. The highways evidence provided as part of the Further Consultation alongside the detailed Highways Review undertaken by GTA Civils on behalf of The Estate clearly identify that the Beige 1090 route should not be considered any further due to fundamental capacity issues which cannot be addressed.
- 1.7. The benefits of the Magenta 1001, Amber 1001 and Grey 1001 options would be significantly greater in highways terms notably accident reduction, impact upon vulnerable users, reducing traffic through Arundel and journey time savings than the Cyan 1000, Beige 1090 and Crimson 1001 options.
- 1.8. There are capacity concerns at the Ford Road junction associated with the Amber 1001 and Grey 1001 options. Whilst these could be mitigated against, in terms of highways benefits / impacts alone The Estate consider that the Magenta 1001 option is the preferable route.
- 1.9. In terms of heritage impacts, the Cyan 1000 and Beige 1090 routes would have by far the greatest adverse effect, impacting on a total of 19 listed buildings at both the operational and construction phases compared to just 9 affected by the next most harmful route, the Amber route 1001. The Magenta 1001 route would affect the least listed buildings of all of the options, affecting just 1.



- 1.1. The accompanying Heritage Report prepared by Savills on behalf of The Estate has found that the Cyan 1000 and Beige 109 routes would both have a moderate adverse impact upon the Grade I Arundel Castle arguably the most significant heritage asset in the District at both the construction and operational phases. This finding is mirrored in the Central Heritage Chapter of the Environmental Assessment Report (EAR).
- 1.11. Consequently in accordance with the NN NPS the development would need to be “wholly exceptional” in order to be taken forward. Therefore in terms of heritage it is clear that the Cyan 1000 and Beige 109 routes are the least preferable. The most preferable option in terms of heritage is the Magenta 10/10 route as supported by The Estate.
- 1.1. The accompanying Air Quality Report produced by Air Quality Consultants Limited (AQC) on behalf of The Estate concludes that in terms of air quality the Cyan 1000 and Beige 109 routes have the highest number of adverse changes to air quality 101 and 109 receptors worsening in air quality and therefore are the least preferential routes. The Magenta 10/10 route would have the greatest beneficial impact on air quality resulting in the greatest beneficial change to receptors 1000 and the greatest reduction in annual nitrogen dioxide 18.00g/m³ of all of the options. As such from an air quality perspective the preferred route is the Magenta 10/10 route which is clearly the most suitable option.
- 1.1. In terms of noise impacts when the number of properties impacted at construction and operational phase is considered and assuming the mitigation allowed for can be achieved the two least favourable options are the Cyan 1000 and Beige 109 routes. The Crimson 1001 route is also a less favourable route due to the significantly greater impact during operation 1009 properties than the other routes. The remaining three routes Magenta 10/10 Amber 10/10 and Grey 10B10 are by far the least harmful and therefore the preferable routes in terms of noise impacts. The Estate’s overall view that the Magenta 10/10 route should be taken forward is therefore also supported by the evidence in relation to Noise which identifies it as one of the preferred options.
- 1.1. All of the proposed routes have the potential for significant environmental impacts with the potential to adversely affect ecology and ecosystems. Impacts upon many protected species which are inevitable with all of the proposed routes can often be mitigated against through route design or suitable environmental management. However some impacts such as those on designated Local Wildlife Sites (LWS) ancient woodland and veteran trees cannot be as easily mitigated.
- 1.1. In relation to ecology biodiversity and trees the Grey 10B10 and Magenta 10/10 routes would be the most preferable as they would impact on significantly smaller areas of woodland and would not travel through any LWS therefore having a lesser impact on ecological designations than the other four routes. The least favourable route by a substantial amount in terms of ecology and trees would be the Crimson 1001 route which would travel through large areas of both the Reell Wood Complex LWS and the Binsted Wood Complex LWS.



- 1.1. All of the proposed routes would also impact upon the South Downs National Park (SDNP) and its setting to a degree by virtue of their proximity to the Park. The Grey B1 route is located entirely outside of the SDNP whilst the Magenta A1 option would only result in 1.5 km of road being built in the SDNP. The remaining four options would all result in a significant amount of new road to being built in the park. Consequently the Estate considers the Grey B1 and Magenta A1 options to be the preferred options in relation to impact on the SDNP. This further supports the Estate's view that the Magenta A1 route should be taken forward.
- 1.1. It is noted that the current budget allocated for the project through the Roads Investment Strategy (RIS) would only cover the Cyan 1 and Beige 19 routes. Despite potential funding concerns, the Estate are of the view that the Cyan 1 and Beige 19 routes would not achieve the fundamental aims of a new bypass around Arundel which should seek to lessen traffic flows and congestion through the town. Therefore, should the budget not be increased to allow for an alternative route to be taken forward and regardless of the need for a new bypass, the Estate would not support either scheme, preferring instead a do nothing approach.
- 1.18. After nearly half a century of delay, Arundel and the wider region needs a proper offline bypass which rectifies and alleviates a multitude of issues associated with the existing A27. The Estate implores Highways England to grasp the nettle and select an 'offline' option which provides the best solution for many years to come. Taking all of the considerations in the road, the Estate express a strong preference for the Magenta A1 route which scores more positively than the other routes in relation to almost all considerations.
- 1.19. The Estate also express the firm view based on the information contained in this representation and appendices and the views put forward therein that the Cyan 1 and Beige 19 routes should not be taken forward for further consideration. Either of these short sighted options would be a complete disaster for Arundel, its residents and the surrounding area. They do not sufficiently solve current problems associated with the existing A27 for the long term. Furthermore they would cause immeasurable and unnecessary harm to the special and unique town of Arundel. The Estate are and will remain firmly opposed to either option under any circumstances.

1. Introduction

Background to the representation

- 1.1. This representation is provided in response to the Further Consultation undertaken by Highways England in relation to the proposed A27 Arundel Bypass which closes on the 30th October 2019. The representation is submitted on behalf of The Norfolk Estate (hereinafter referred to as The Estate).
- 1.2. Representing several separate legal entities, The Norfolk Estate owns and manages land and properties in Arundel and the surrounding area. The Fitzalan Howard family, as Dukes of Norfolk, have been an integral part of the local area for many centuries. All significant consultation routes would pass at least partly through land owned by The Norfolk Estate.
- 1.3. The Estate is a long term steward of Arundel and the environment, dating back to the 11th Century. The Estate is supportive of a new Arundel A27 Bypass and welcomes the opportunity to provide comments in relation to the potential routes that are being considered by Highways England.
- 1.4. The Estate has instructed Savills to coordinate a response to the Further Consultation on their behalf.
- 1.5. In order to provide technical support for the representation and to ensure that the representation is technically sound, a number of specialist technical consultants have been instructed in addition to Savills to provide necessary input into this representation.
- 1.6. Specifically GTA Civils have been instructed to provide technical highways input into the representation, Savills Heritage have been instructed to provide heritage input, Air Quality Consultants Limited have been instructed to provide air quality input and Noise Consultants Limited have been instructed to provide noise input.
- 1.7. The output of these instructions has been the production of a number of technical reports which inform this representation, these are included as appendices **Appendices 2 – 5**.
- 1.8. In addition to the various technical reports identified above, Savills have also reviewed the consultation material and have provided an overarching planning assessment of the proposals.

Structure of the Representation

- 1.9. It is acknowledged that a Consultation Response Form has been produced by Highways England in order for interested parties to put forward their views. This Consultation Response Form has been duly completed and is included at **Appendix 1** however, in order to provide a fully informed and robust response to the consultation this representation has been prepared in addition to the form.

1.1 Rather than specifically addressing the questions provided on the Consultation Response Form, this representation is structured around the various considerations that Highways England will need to refer to when making their final decision as to which option to proceed with. The findings of the representation and the overall conclusion are then presented. The questions provided on the Consultation Response Form are however referred to throughout this representation where relevant.

1.11. The representation comprises the following sections:

- **Section 1: Executive Summary.** This section provides a summary of the findings of the representation and the position of the Estate in relation to the various options being considered.
- **Section 2: Introduction.** This section provides background information on the Estate, sets the context of the consultation, including the various options being considered and provides an overview of the structure of the representation, as well as explaining who has input into it.
- **Section 3: Highways.** This section explores the merits of the various options being considered from a highways perspective.
- **Section 4: Heritage.** This section considers the implications upon the many heritage assets within and around Arundel of the various options being considered.
- **Section 5: Air Quality.** This section reviews the implications of the various options in terms of air quality.
- **Section 6: Noise.** This section provides a review of the noise impacts arising from the various options.
- **Section 7: Other Considerations.** This section provides an overview of the remaining considerations arising from the options.
- **Section 8: Conclusions.** This section draws the findings of the preceding sections together into a summary and presents the Estate's preferred option as well as highlighting particular concerns with a number of the options being considered.

The A27 Arundel Bypass Further Consultation

1.1 The A27 Arundel Bypass scheme is identified in the Government's 2015 – 2030 Road Investment Strategy (RIS1), the aim of which is to upgrade and improve England's Strategic Road Network. Highways England are currently consulting on six options for the A27 Arundel Bypass.

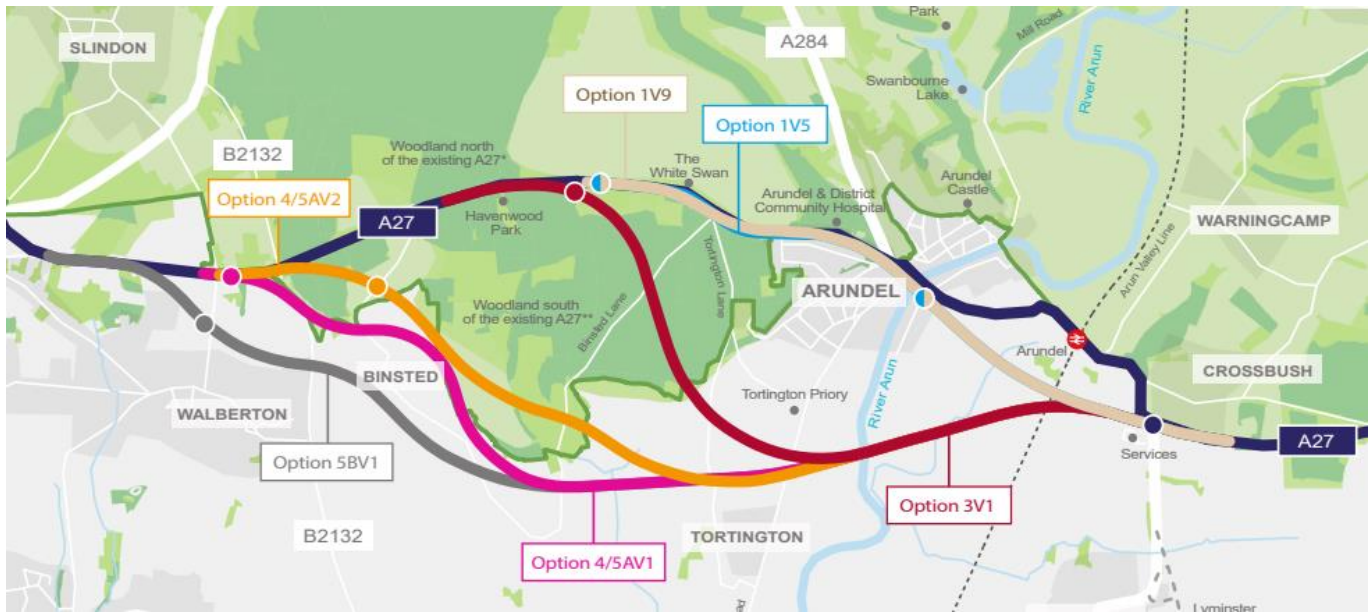
1.1 The six options being considered can be summarised as:

- Option 1 (Cyan) – 1.5km of new dual two-lane carriage way between Crossbush and the existing transition between single and dual carriage way to the west of Arundel. There would be no direct access to the local road network.

- Option 109 (Beige) – 1.5km 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’;
- Option 001 (Crimson) – 1km of new dual two-lane carriageway bypass located to the south of the existing A27. Starting in the east at Crossbush and ending west of Havenwood Park
- Option 00A01 (Magenta) – 1.5km of new dual two-lane carriageway bypass located to the south of the existing A27. Starting in the east at Crossbush and ending west of the existing B100 Yapton Lane and Shellbridge Road junction
- Option 00A00 (Amber) – 1.9km of new dual two-lane carriageway located to the south of the existing A27. Starting in the east at Crossbush and ending west of the existing B100 Yapton Lane and Shellbridge Road junction and
- Option 001 (Grey) – 8km 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.

1.1 Of the six proposed options, Options 100 (Cyan) and 109 (Beige) would follow a similar route to the existing A27 through the centre of Arundel, creating a dual two-lane carriageway. The remaining four options would travel around Arundel to the south, creating a new dual carriageway following various different routes. The various options are shown in **Figure 2.1** below.

Figure 2.1: A27 Arundel Bypass Scheme Options



Policy Context

- .1□ The Consultation Brochure states that the A□□ Arundel Bypass meets the criteria of being a Nationally Significant Infrastructure Project (NSIP) under the Planning Act 2008. As such it must be authorised by the Secretary of State (SoS) by way of a Development Consent Order (DCO). A DCO if granted will authorise Highways England to undertake the necessary work required to complete the bypass including allowing compulsory acquisition of land if required.
- .1□ The SoS is required to assess the scheme that Highways England choose to take forward under the National Networks National Policy Statement (NN NPS).
- .1□ The NN NPS sets out at *Section 5 Generic Impacts* a number of topics that NSIP are likely to impact upon and provides the overarching policies that projects will be assessed against when considered by the SoS. These Topics are wide ranging and capture a multitude of different impacts. Those impacts that The Estate consider to be key considerations in relation to the proposed A□□ Arundel Bypass are set out below
 - Air Quality (paras 1.1 – 1.10)
 - Biodiversity and Ecological Conservation (paras 1.11 to 1.18)
 - The Historic Environment (paras 1.19 – 1.20)
 - Landscape and Visual Impact (paras 1.21 – 1.24)
 - Noise and Vibration (Paras 1.25 – 1.28) and
- .18. The key guidance under which the preferred route will ultimately be assessed in relation to each of these topics is explored within the relevant sections of this representation and conclusions as to what The Estate consider to be the most appropriate route or routes to take forward based on the evidence gathered is provided.



Highways

- 1. As set out previously in this representation, six options for the Arundel Bypass are currently being considered by Highways England. The Consultation Brochure provides a broad overview of each of the options as well as the benefits and impacts of each option and traffic flow comparisons. The information summarised in the Consultation Brochure is supported by a number of technical documents.
- 2. GTA Civils were instructed by The Estate to undertake a review of the technical highways information supporting the Further Consultation. The findings of this review are contained in the Highways Report produced by GTA Civils which is appended to this representation at **Appendix 2**.
- 3. Prior to detailing the findings of the GTA Civils report, it is helpful to analyse the information regarding the six options in terms of highways impacts contained within the Consultation Brochure. The key highways impacts arising from each option as set out in the Consultation Brochure are set out in **Table 3.1** below.

Table 3.1: Comparison of Highways impacts arising from each option

Option	Accidents Avoided	Operational Capacity in 2041	Average Journey time saving
Cyan 1000	11	10000	8 mins
Beige 1090	9	8090	8 mins
Crimson 1001	9	10000	9 mins
Magenta 10/1A10	10	10000	10 mins
Amber 10/1A000	10	10000	10 mins
Grey 10B10	10	10000	11 mins

- 4. As can be seen from the table above, five of the proposed routes would be at 10000 capacity in 2041. The Beige 1090 route however would be at 8090 capacity. This raises serious concerns with the Beige 1090 route and whether it is worth considering seriously as an option as there would likely be a need for a further upgrade in the near future. It is the view of The Estate that any proposed upgrade should be future proof and therefore capable of absorbing additional capacity well beyond 2041 to avoid the need for further costly and disruptive upgrades in the near future.
- 5. It is also clear from the table above that whilst all the options will result in a reduction in accidents, the Magenta 10/1A10, Amber 10/1A000 and Grey 10B10 options would result in a significantly greater reduction in accidents. As such, from a safety point of view, these three routes would clearly be more favourable than the Cyan 1000, Beige 1090 or Crimson 1001 options.

- Finally although average journey time savings are not significantly different for any of the proposed options it is notable that the Cyan 1000 Beige 109 and Crimson 1001 options would also provide the lowest average journey time savings of all site options therefore suggesting that they are the least effective of the site options proposed. The analysis clearly shows a preference for the Magenta 100A1 Amber 100A and Grey 100B1 options in journey time reductions as well.
- The GTA Civils Highways Report Appendix further supports the broad findings summarised in the Consultation Brochure that the Cyan 1000 Beige 109 and Crimson 1001 options are the least beneficial locations from a highways perspective.
8. The GTA report raises concerns in paragraph 11 with the use within the highways model of average March weekday traffic flows and average peak hour flows. This is because in a location such as Arundel this is likely to underestimate the extent of peak traffic through the year. As a result the traffic demands of each proposed route and the flows at key junctions could be considerably higher than estimated. This of course would have an impact upon the estimated capacity of each option in 2031 and therefore the ability of the various options to cope with increased traffic looking beyond 2031.
9. Indeed the GTA Report concludes at paragraph 11 that for the Beige 109 option the Ford Road 'throughabout' signalised roundabout would operate extremely poorly in the PM peak in the design year with a 1/10 Practical Reserve Capacity (PRC). It continues at paragraph 18 that the Beige 109 option would also barely have sufficient capacity to cater for average demand with substantial over capacity issues in dealing with peak demands which cannot readily be mitigated against. As such it is clear that the Beige 109 option is not a suitable option to take forward as it simply would not achieve the required capacity increase.
10. It is also relevant that the GTA Report raises concerns with the capacity of the Amber 100A and Grey 100B1 options. It indicates at paragraph 11 that in each scenario the Ford Road roundabout would operate slightly over capacity although it is considered that the issue could be mitigated through design modifications in future stages of the scheme.
11. In addition the GTA Report raises concerns that no proper assessment has been presented of the impacts on vulnerable road users (pedestrians, cyclists, equestrians) of any of the options. The GTA Report concludes at paragraph 19 that the Cyan 1000 and Beige 109 options would both have substantially greater impacts in the vicinity of the Ford Road roundabout for vulnerable road users than the four other options raising particular concern again with the Beige 109 option.
10. Finally the GTA Report concludes that the 'offline' routes (Crimson 1001, Magenta 100A1, Amber 100A and Grey 100B1) would offer significant advantages compared with the 'online' routes relieving the town of a substantial volume of existing and future through traffic, which the 'online' routes (Cyan 1000 and Beige 109) would not achieve.
10. In conclusion the highways evidence provided as part of the Further Consultation alongside the detailed Highways Review undertaken by GTA Civils clearly identifies that the Beige 109 route should not be considered any further due to fundamental capacity issues which cannot be addressed.

- 1□ It is also clear from the reports that the benefits of the ‘offline’ options□□which create a route around Arundel□□would be significantly greater in high□ays terms□ notably accident reduction□ impact □pon □□Inerable □sers□ reducing traffic through Arundel and □□rney time sa□ings than the ‘online’ options. The exception to this is the Crimson □□□1□ option □ which □□ would perform poorly in relation to accident avoidance and □□rney time sa□ings.

- 1□ Finally□ it is noted that there are capacity concerns at the Ford Road □□nction associated □□ith the Amber □□/□A□□□□ and Grey □□B□1□ options. Although these could be mitigated against□ based on all of the evidence and considering all of the potential high□ays impacts□ in high□ays terms alone it is considered that the Magenta □□/□A□1□ option is clearly the preferable route.

□ Heritage

- 1. The NN NPS sets out the approach that the SoS should have to determining NSIP's that have the potential to impact □pon heritage assets. The key paragraphs are provided below.

“In considering the impact of a proposed development on any heritage assets, the Secretary of State should take into account the particular nature of the significance of the heritage asset and the value that they hold for this and future generations. This understanding should be used to avoid or minimise conflict between their conservation and any aspect of the proposal”. (para 5.129)

“When considering the impact of a proposed development on the significance of a designated heritage asset, the Secretary of State should give great weight to the asset’s conservation. The more important the asset, the greater the weight should be. Once lost, heritage assets cannot be replaced and their loss has a cultural, environmental, economic and social impact. Significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting. Given that heritage assets are irreplaceable, harm or loss affecting any designated heritage asset should require clear and convincing justification. Substantial harm to or loss of a grade II Listed Building or a grade II Registered Park or Garden should be exceptional. Substantial harm to or loss of designated assets of the highest significance, including World Heritage Sites, Scheduled Monuments, grade I and II Listed Buildings, Registered Battlefields, and grade I and II* Registered Parks and Gardens should be wholly exceptional”. (para 5.131)*

“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”. (para 5.133)

- . In light of this guidance it is clear that it is □tally important to preserve the setting of the □ario□s heritage assets □ithin Ar□ndel□not least of all the Grade I Listed Ar□ndel Castle□□hich is also a scheduled monument□any harm to □hich sho□d be □stified as “*wholly exceptional*”, and sho□d ensure that the setting is not harmed as a result of the chosen route for the bypass.
- . The EAR Central Heritage Chapter provides a review of the impact of the □ario□s routes □pon heritage assets at both the construction and operational phases. The findings of the EAR□n terms of the numbers of listed buildings to be affected are summarise in **Table 4.1** on the following page.



Table 4.1: Summary of the impacts of the proposed routes on Listed Buildings as identified in the EAR

Option	Construction Phase – Number of Listed buildings affected			Operational Phase – Number of Listed buildings affected		
	Grade 1	Grade II*	Grade II	Grade 1	Grade II*	Grade II
Cyan (1V5)	0	0	18	0	0	18
Beige (1V9)	0	0	18	0	0	18
Crimson (3V1)	0	1	0	0	1	0
Magenta (4/5AV1)	0	1	0	0	1	1
Amber (4/5AV2)	0	1	0	0	1	1
Grey (5BV1)	0	1	0	0	1	0

- 4.4. As can be seen, the two most harmful routes by far are the Cyan (1V5) and Beige (1V9) routes which affect a total of 18 Listed Buildings at both the operational and construction phases compared to just 1 affected by the next most harmful route, the Amber route (4/5AV2).
- 4.5. In addition to the impacts upon Listed Buildings it is notable that the Cyan (1V5) and Beige (1V9) routes would also affect the most other heritage assets (Registered Parks and Gardens, Conservation Areas and Scheduled Monuments). As such, it is clear that in terms of numbers of heritage assets affected alone the least preferable routes are the Cyan (1V5) and Beige (1V9) routes, with the Magenta route being the most preferable.
- 4.6. Of course, this quantitative analysis does not provide an indication of the level of harm to the affected assets, it does however provide a useful indication as to the potential impacts of each option upon heritage assets in general.
- 4.7. In addition to this assessment, Savills Heritage were instructed to undertake a detailed review of the impact of the proposal upon the Grade I Listed Arundel Castle (ref 10009000), the Grade II Arundel Castle Registered Park and Garden (ref 10001000) and the Arundel Castle Scheduled Monument (ref 10100000) which are considered to be the most significant heritage assets in the Town. The impact on the historic core of Arundel town itself, identified by the designated conservation area, has also been carefully considered. Savills Heritage’s Report is contained in **Appendix 3**.
- 4.8. The Heritage Report highlights that the setting of the Castle, the views towards and from it and the place it holds in and beyond the town today make a great contribution to its significance.



- 9. It is important to note that the Heritage Report identifies that the introduction of the existing A27 route between the historic town of Arundel and Ford has resulted in a barrier through the town since the second half of the 19th century (para 4.4.1). The report continues that there is a degree of visual intrusion caused by the current road. In this context it is important to ensure that the least harmful route upon the highly significant heritage assets contained within and around Arundel is taken forward in order to comply with paragraphs 4.1.1 – 4.1.3 of the NN NPS.
- 10. The Heritage Report identifies at paragraph 4.4.1 that the proposed options which pass close to the present A27 route (Cyan 1000 and Beige 1090) will comprise a section of elevated flyover across the river valley which will result in significantly greater visual intrusion in views to and from the castle. The Heritage Report continues that the height of the proposed road and its increased bulk in addition to its proximity to the town will result in a much increased visual presence and intrusion upon the setting of Arundel Castle and a moderate adverse impact upon the setting and significance of the Castle.
- 11. This conclusion of moderate adverse impact upon the setting of Arundel Castle as a result of the Cyan 1000 and Beige 1090 routes contained in the Heritage Report is mirrored in the Core and Heritage Chapter of the EAR which concludes that there will be a moderate adverse impact upon the significance of the Castle during both the construction and operational phases as a result of these two options. Although it is noted in the Heritage Report at paragraph 4.4.1 that this result is critically not obviously carried through to the EAR summary which concludes that the schemes will result in only slight adverse impacts on all heritage assets.
- 12. To this end the EAR summary document is clearly misleading and does not portray the facts regarding the heritage impacts of the proposed routes accurately. Despite this the EAR itself appears to accurately identify the impacts upon the Castle arising from the two routes through Arundel (Cyan 1000 and Beige 1090).
- 13. It is clear that in addition to being by far the most harmful routes upon heritage assets as a whole the Cyan 1000 and Beige 1090 routes would also cause significant harm to the setting of Arundel Castle a Grade I Listed Building which would be contrary to the NN NPS. As the most significant heritage asset in the Town and a Grade I Listed Building, harm to the Castle is a key consideration which should be “wholly exceptional”. This incredibly high bar would be met as a result of the proposed bypass and therefore the Cyan 1000 and Beige 1090 routes should be discounted from further consideration.
- 14. Of the remaining four routes The Estate believe that the Magenta 1100 route would have the least impact upon heritage assets and therefore should be taken forward as the preferred option.

1. Air Quality

1.1. The NN NPS sets out at paragraph 11 in relation to air quality impacts

“Air quality considerations are likely to be particularly relevant where schemes are proposed:

- *within or adjacent to Air Quality Management Areas (AQMA);*
- *where changes are sufficient to bring about the need for a new AQMA or change the size of an existing AQMA; or bring about changes to exceedances of the Limit Values, or where they may have the potential to impact on nature conservation sites”.*

1.2. The Consultation Brochure for the A27 Arundel Bypass Further Consultation contains limited information in relation to air quality simply advising that there is potential for temporary adverse impacts on air quality arising from all options during the construction phase and that there would be no significant affect arising from any option during the operational phase. There is however a large amount of more detailed analysis on air quality contained within the Environmental Assessment Report (EAR) produced in support of the Further Consultation.

1.3. Air Quality Consultants Limited (AQC) were instructed to undertake a review of the Air Quality Chapter of the EAR to identify the different impacts in terms of air quality arising from each option. The findings of the AQC review are included in an Air Quality Report appended to this representation (Appendix 1)

1.4. The Air Quality Report concludes at paragraph 1.1 that in terms of air quality the Cyan 1000 and Beige 1090 routes have the highest number of adverse changes to air quality at 1 and 9 receptors worsening in air quality and therefore are the least preferential routes.

1.5. The Air Quality Report also highlights at paragraph 1.1 that the Magenta 10/10 route would have the greatest beneficial impact on air quality resulting in the greatest beneficial change to receptors 1000 and the greatest reduction in annual nitrogen dioxide (8.00g/m³) of all of the options. As such from an air quality perspective it is considered that the Magenta 10/10 is the preferred option.

1.6. In addition the Air Quality Report notes two major flaws in the approach taken to the EAR. The first flaw as set out in paragraphs 9 – 11 of the Air Quality Report is that the air quality assessment does not consider the impacts of traffic emissions on the Chantry Mill Site of Special Scientific Interest (SSSI) the Binsted Food Complex Local Wildlife Site (LWS) or the Reuell Food Complex LWS all of which are within 100m of at least one of the routes and all of which are sensitive to nitrogen deposition. As per paragraph 11 of the NN NPS the impact on air quality in nature conservation sites should clearly be a key consideration.



- .□ The Air Quality Report identifies that the Crimson □□□1□ route travels through the Binsted □ood Comple□ L□ S and therefore has the potential to have a significant effect on air □□ality □ithin the L□ S□ and certainly a greater impact than the other roads □hich travel around the L□ S.
- .8. Similarly the Cyan □□□□ Beige □□9□ and Crimson □□□1□ routes all travel through the Re□ell □ood Comple□ L□ S and therefore also have the potential to have a significant impact on the air □□ality □ithin this L□ S.
- .9. Given that the Cyan □□□□ and Beige □□9□ routes have already been identified as the most harmful in terms of air □□ality and it is these routes □as □ell as the Crimson □□□1□ route that have the greatest potential for significant impacts on the air □□ality □and consequently the biodiversity at the L□ S's □it is □ery likely that the additional assessment required □ould reinforce the □ie□ that the Cyan □□□□ and Beige □□9□ routes are the least preferable in terms of air □□ality □□ith the likely addition of the Crimson □□□1□ route.
- .1□ The second major flaw □as set out in paragraphs □.1□ and □.1□ of the Air Quality Report is that the □se of select individual receptors to measure annual mean nitrogen concentrations has the potential to □nder□ predict the likely impacts of the options. A□C advise that to include more receptors □ould result in further data to either □orsen or improve the air □□ality conclusions of each of the options. The Air Quality Report suggests that this is particularly important for the Cyan □□□□ and Beige □□9□ routes □hich travel through the Ford Road roundabout □here nitrogen dioxide concentrations are above the annual mean objective.
- .11. As a result □it is likely that □□ere more receptors included in order to get a more detailed □ie□ of air □□ality impacts □the Cyan □□□□ and Beige □□9□ routes □ould score more negatively □therefore reinforcing the □ie□ that they are the less preferable routes.
- .1□ In summary □in terms of air □□ality □the Cyan □□□□ and Beige □□9□ routes are clearly the least favourable □□hilst the Magenta □□/□A□1□ route is the preferred route. The amendments required to the EAR Air Quality Assessment □to address the flaws highlighted are likely to simply reinforce these findings □□ith the potential inclusion of the Crimson □□□1□ route as a particularly □nfavourable option in terms of air □□ality.
- .1□ It is the Estate's view that the Magenta □□/□A□1□ route □□hich □ould have the least impact on air □□ality □should be taken forward as the preferred option.

□ Noise

□1. In relation to Noise impacts □ the NN NPS sets out at paragraph □ 188 □

“Factors that will determine the likely noise impact include:

- *construction noise and the inherent operational noise from the proposed development and its characteristics;*
- *the proximity of the proposed development to noise sensitive premises (including residential properties, schools and hospitals) and noise sensitive areas (including certain parks and open spaces);*
- *the proximity of the proposed development to quiet places and other areas that are particularly valued for their tranquillity, acoustic environment or landscape quality such as National Parks, the Broads or Areas of Outstanding Natural Beauty; and*
- *the proximity of the proposed development to designated sites where noise may have an adverse impact on the special features of interest, protected species or other wildlife”.*

□□ It continues at paragraph □ 19 □□

“The Secretary of State should not grant development consent unless satisfied that the proposals will meet, the following aims, within the context of Government policy on sustainable development:

- *avoid significant adverse impacts on health and quality of life from noise as a result of the new development;*
- *mitigate and minimise other adverse impacts on health and quality of life from noise from the new development; and*
- *contribute to improvements to health and quality of life through the effective management and control of noise, where possible”.*

□□ The Environmental Assessment Report (EAR) □ which accompanied the consultation identifies the number of properties to be affected by the □arios proposed routes during the construction and operational phases in the Noise and Vibration Chapter. The number of properties to be adversely affected are summarised in **Table 6.1** on the following page.

Table 6.1: Number of properties to be affected by Noise by each option

Option	Number of properties within 100m to be significantly adversely affected during construction phase	Number of properties within 100m to experience a moderate / major adversely affected during operational phase
Cyan (1V5)	11	18
Beige (1V9)	9	11
Crimson (3V1)	1	9
Magenta (4/5AV1)	1	1
Amber (4/5AV2)	1	1
Grey (5BV1)	98	1

- 6.1. As shown by **Table 6.1** when the number of properties impacted at construction and operational phase is considered and assuming the mitigation allowed for can be achieved the two least favourable options are the Cyan 11 and Beige 9 routes. The Crimson 1 route is also less favourable due to the significantly greater impact during operation than the other routes.
- 6.2. The remaining three routes Magenta 1/AV1 Amber 1/AV2 and Grey 5BV1 are clearly the least harmful routes in terms of noise impacts. As per the guidance contained in paragraph 188 of the NN NPS the number of noise sensitive receptors such as dwellings to be affected by the proposal is a key factor that the SoS will need to consider in determining proposals.
- 6.3. In addition to receiving the information on noise that informed the Further Consultation The Estate instructed Noise Consultants Limited (NCL) to undertake a review of the Noise impacts of the six proposed routes for the A27 Arundel Bypass. As part of this review NCL reviewed the Noise and Vibration chapter of the EAR. The findings of the review are included in the NCL Report at **Appendix 5**.
- 6.4. The Noise Report highlights a number of minor issues with the EAR which are not considered to materially affect the findings of the EAR however the Noise Report also identifies several moderate issues which do have the potential to influence the results of the EAR.
- 6.8. Of particular concern is that non-residential receptors do not appear to have been considered in the EAR as per paragraph 100 of the Noise Report. The impacts upon non-residential receptors is clearly also a key consideration when determining the impact of the various proposed routes and therefore this should be explored further.
- 6.9. In addition as identified in paragraphs 11 and 12 of the Noise Report the assessment of each option in the EAR is generated with mitigation applied. The mitigation includes reference to 2m high noise barriers of varying length for each option as well as a low noise surface.

1. The EAR does not provide details of the barrier length or indeed the assumed location for each option. As such it is difficult to provide any comment in relation to this however it is of relevance that any barrier around the Cyan 1 or Beige 19 options would be difficult to introduce given the residential and built up nature of the areas which mean that space is constrained and visual impacts of the barrier would be significant. In addition any barrier is likely to have a detrimental impact upon the setting of numerous designated heritage assets within Arundel.
11. In light of this the EAR should identify the location and scale of any required barriers relative to each model and should only apply such mitigation where it would be possible to install it. The consequence of such an exercise is likely to result in an increase in the numbers of properties effected both during construction and operation in relation to the Cyan 1 and Beige 19 routes.
1. As a result of the concerns with the EAR raised in the Noise Report it is considered that the harmful impacts of the two least preferred routes are likely to increase as a result of the additional work required. Consequently the view of The Estate that the Magenta A1 Amber A and Grey B1 routes are the preferred routes in terms of noise is likely to be reinforced by the additional evidence required.
1. The Estates overall view that the Magenta A1 route should be taken forward is therefore also supported by the evidence in relation to Noise which identifies it as one of the preferred options.



Other Considerations

1. In addition to the key concerns of The Estate considered in detail previously in this representation there are a number of other elements relevant to the assessment of which route should be taken forward. These have been set out in the Consultation Brochure. The Estate’s views on a number of these additional elements are set out below.

Ecology, Biodiversity and Trees

The Consultation Brochure sets out that all of the proposed routes have the potential for significant environmental impacts with the potential to adversely affect ecology and ecosystems. It is noted that impacts upon many protected species which are inevitable with all of the proposed routes can often be mitigated against through route design or suitable environmental management. However some impacts such as those on designated Local Wildlife Sites (LWS), Ancient Woodland and Veteran trees cannot be as easily mitigated.

As set out previously in the Air Quality section of this representation the Cyan (1V5), Beige (1V9) and Crimson (3V1) routes would all travel through LWS for a significant distance notably the Rebell Wood Complex LWS and in relation to the Crimson route (3V1) the Binsted Wood Complex LWS. In addition the Amber (4/5AV2) route would travel through the Binsted Wood Complex LWS for a short distance.

These LWS are both sensitive to nitrogen deposition which would increase with the additional traffic that the proposed routes would give rise to. As such, impacts upon these LWS’s would not just be limited to those arising from the physical construction of the road but through its operation as well. In light of this these four routes will inevitably have a notable adverse impact upon the identified LWS.

The consultation document also identifies the level of woodland to be impacted upon by each route. This is set out in **Table 7.1** below.

Table 7.1: Amount of woodland to be impacted by each proposed route

Option	Amount of woodland to be impacted
Cyan (1V5)	8.00ha
Beige (1V9)	0.00ha
Crimson (3V1)	00.00ha
Magenta (4/5AV1)	0.01ha
Amber (4/5AV2)	0.00ha
Grey (5BV1)	1.09ha

1.1. It is accepted that this quantitative analysis does not identify the quality of the woodland to be affected but it does provide a useful comparison for broadly identifying impacts upon woodland. The table clearly identifies the two preferred routes in terms of impact upon woodland and trees are the Grey and Magenta routes with the less favourable routes being Crimson followed by Cyan and Beige.

1.2. In summary in terms of ecology biodiversity and trees based on the information available the Grey route is clearly the preferred route closely followed by the Magenta route. These two routes would have a significantly lesser impact than the remaining four routes the least favourable of which would be the Crimson route by a substantial amount.

South Downs National Park (SDNP)

1.8. In relation to development within nationally designated areas such as National Parks the NN NPS sets out at paragraphs 1.1.1 and 1.1.2

“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. Consideration of such applications should include an assessment of:

- *the need for the development, including in terms of any national considerations, and the impact of consenting, or not consenting it, upon the local economy;*
- *the cost of, and scope for, developing elsewhere, outside the designated area, or meeting the need for it in some other way; and*
- *any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated” (para 5.151)*

“There is a strong presumption against any significant road widening or the building of new roads and strategic rail freight interchanges in a National Park, the Broads and Areas of Outstanding Natural Beauty, unless it can be shown there are compelling reasons for the new or enhanced capacity and with any benefits outweighing the costs very significantly. Planning of the Strategic Road Network should encourage routes that avoid National Parks, the Broads and Areas of Outstanding Natural Beauty” (para 5.152)

1.9. Arundel is located on the southern edge of the South Downs National Park (SDNP). The existing A roads run broadly along the southern edge of the SDNP crossing into and out of the park on a number of occasions.

1.10. The Consultation Brochure sets out the amount of road in terms of distance that would be built in the SDNP if each option is taken forward. This is set out in **Table 7.2** on the following page.

Table 7.2: Amount of road in the SDNP as a result of each option.

Option	Distance of new road within the SDNP
Cyan (1V5)	1.9km
Beige (1V9)	1.9km
Crimson (3V1)	0.8km
Magenta (4/5AV1)	0.0km
Amber (4/5AV2)	1.9km
Grey (5BV1)	0km

11. Clearly the Grey route is the preferred option in terms of road to be built within the SDNP alone closely followed by the Magenta route option. The remaining four options would all result in a significant amount of new road being built in the SDNP which would be contrary to paragraphs 11 and 11 of the NN NPS and therefore the benefits would need to significantly outweigh the harm. Given the limited improvements upon the highways network identified in Section 4 of this representation arising from the Cyan and Beige options it is not considered that either option would justify development within the SDNP and therefore neither should be taken forward for further consideration.

12. Whilst located outside of the SDNP entirely the Grey route still has potential to impact upon the setting of the SDNP and therefore cannot be considered to have no impact upon it. Similarly the Magenta route is also likely to have an impact upon the setting of the park by virtue of its proximity. Regardless of this as a result of being situated entirely / largely outside of the SDNP it is fair to conclude that the Grey and Magenta routes are less harmful to the SDNP than the remaining four routes which are located largely within it. As such, the Estate's position that the Magenta route should be taken forward as the preferred route is supported by the evidence in terms of impact upon the SDNP as it is one of the two routes that would have the least land take within the National Park.

Landscape

13. It is accepted that the Cyan and Beige options would have a lesser landscape impact than the other four options largely due to the fact that they would largely utilise the existing route of the A27 and therefore the impact of the new road is in the context of a landscape within which there is an existing major highway. The other routes would introduce a new section of road into areas of landscape that are not currently intersected by major highways and therefore it is inevitable that the landscape impacts of the new routes (Crimson, Magenta, Amber and Grey) will be greater.



- 11. This must however be considered in the context of the purpose of the proposed bypass. The proposed bypass is required in order to reduce journey time and congestion on the A27 around Arundel but also to reroute traffic around the historic town. As such it is the view of the Estate that the Cyan 1V5 and Beige 1V9 routes whilst of a lesser landscape impact would not achieve the fundamental purpose of the new highway with genuine long term benefits and therefore should not be considered any further.
- 11. The Estate are of the view that the new bypass should divert traffic around Arundel not increase traffic through the town and therefore it is considered inappropriate to assess the landscape impacts of the four 'offline' routes in the context of the two 'online' routes against which it is inevitable that the 'offline' routes would compare unfavourably.

Funding / Costs

- 11. The Consultation Brochure sets out that two of the six options (Cyan 1V5 and Beige 1V9) are deliverable within the current budget that has been allocated to the scheme through the Road Investment Strategy (RIS). The cost of each scheme along with the Benefit to Cost Ratio (BCR) and the value for money assessment are included in **Table 7.3** below.

Table 7.3: Assessment of costs of each option

Option	Cost Range (million)	BCR	Value for Money
Cyan (1V5)	£19m – £29m	1.0 – 1.1	Medium
Beige (1V9)	£19m – £29m	1.0 – 1.1	Medium
Crimson (3V1)	£28m – £38m	1.0 – 1.1	Medium
Magenta (4/5AV1)	£28m – £38m	1.0 – 1.1	Medium
Amber (4/5AV2)	£29m – £39m	1.0 – 1.1	Medium
Grey (5BV1)	£28m – £38m	1.0 – 1.1	Medium

- 11. As can be seen the four offline options are considerably more costly than the two online options however this is to be expected given that they would result in the creation of significantly more road and would require the purchase of large portions of new land.
- 18. It is noted that the current budget would only cover the Cyan 1V5 and Beige 1V9 routes. It is also noted that one of the questions on the Consultation Response Form (question B1) is that if only these two options remain affordable which option would The Estate support.

19. The Estate are fully supportive of a new Arundel Bypass however this is only if it is a suitable scheme which would be of long term benefit to the residents of Arundel and the users of the A27 which can be brought forward. Notwithstanding The Estate's other comments contained within this representation it is considered that the Cyan and Beige routes would not achieve these fundamental aims of a new bypass around Arundel and therefore should the budget not be increase to allow for an alternative route to be taken forward regardless of the need for a new bypass the Estate would not support either scheme preferring instead a do nothing approach.
20. The Estate consider that it would be a far better approach to apply for additional funding to allow a scheme which would fully address the purposes of a new bypass such as one of the offline routes to be brought forward.

8. Conclusions

- 8.1. The Norfolk Estate (The Estate) has instructed Savills to prepare a response to the Further Consultation on the A27 Arundel Bypass currently being undertaken by Highways England.
- 8.2. The Estate is a long term steward of Arundel and the environment dating back to the 11th Century. The Estate is supportive of a new Arundel A27 Bypass and welcomes the opportunity to provide comments in relation to the potential routes that are being considered by Highways England.
- 8.3. The Estate has commissioned a number of technical consultants to review elements of the evidence base that The Estate consider to be of particular relevance to the proposed bypass to inform The Estate's view as to which route should be taken forward as the preferred route. The various technical reports produced have been reviewed and have been fed into this representation.
- 8.4. Having considered all of the evidence base documents, the various technical reports produced in support of this representation and the NN NSP, The Estate are of the view that the Magenta (M/A1) route should be taken forward as the preferred option by Highways England.
- 8.5. The Magenta (M/1) Amber (M/A) and Grey (B1) options would all deliver similar benefits in highways terms notably accident reduction, impact upon vulnerable users, reducing traffic through Arundel and journey time savings and would all be significantly more beneficial than than the Cyan (19) and Beige (19) and Crimson (1) options.
- 8.6. In terms of heritage impacts, the two online options Cyan (1) and Beige (19) would result in substantial harm to the setting of Arundel Castle, a Grade I Listed Building. The magnitude of this harm would require "wholly exceptional" circumstances to justify taking forward either of these routes which The Estate do not consider can be demonstrated. The four 'offline' routes would not impact upon the setting of the Castle significantly and the Magenta (M/A1) route would affect the least listed buildings of all of the options, affecting just one.
- 8.7. The accompanying Air Quality Report concludes that the Magenta (M/A1) route would have the greatest beneficial impact on air quality, resulting in the greatest beneficial change to receptors and the greatest reduction in annual nitrogen dioxide deposition of 8.00g/m² of all of the options.
- 8.8. In terms of noise impacts, the Magenta (M/A1), Amber (M/A) and Grey (B1) routes are by far the least harmful when the number of properties impacted at construction and operational phase is considered, all having a similar impact in terms of noise.

- 8.9. In relation to ecology, biodiversity and trees, the Grey B1 and Magenta A1 routes would be the most preferable as they would impact on significantly smaller areas of floodland and would not travel through any LSS, therefore having a lesser impact on ecological designations than the other four routes.
- 8.10. All of the proposed routes would also impact upon the South Downs National Park (SDNP) and its setting to a degree by virtue of their proximity to the park. The Grey B1 route is located entirely outside of the SDNP, whilst the Magenta A1 option would only result in 0.00 km of road being built in the park. The remaining four options would all result in a significant amount of new road being built in the park. Consequently the Estate considers the Grey B1 and Magenta A1 options to be the preferred options in relation to impact on the SDNP.
- 8.11. Taking account of all of the various elements explored within this representation as a whole, the findings of which have been briefly summarised above, the Estate consider the Magenta A1 route to be the preferred option and therefore the option that should be taken forward by Highways England. This is because, as demonstrated above, the Magenta A1 route would have the least adverse / most beneficial impact in relation to almost all of the elements reviewed.
- 8.10. The Estate acknowledge that this option is currently out of the budget allowed for the project as part of the Roads Investment Strategy (RIS) however the Estate are of the firm view that the two routes that are in budget, the Cyan 1000 and Beige 109 routes, which would continue to take traffic through the centre of Arundel are not appropriate options and should not be taken forward. The evidence contained in this representation has clearly shown that in almost all regards the Cyan 1000 and Beige 109 routes would have the greatest adverse impact and therefore are the least preferable options.
- 8.10. Furthermore, the highways review by GTA Civils has identified that the Beige 109 route would have fundamental capacity issues at the Ford Road “throughabout” by the year 2041. In addition, the Estate do not consider that either the Cyan 1000 and Beige 109 routes would achieve the basic aim of a bypass to divert traffic around the town and significantly improve journey times. It is for these reasons that if the budget cannot be increased to allow for one of the ‘offline’ routes to be brought forward, the Estate would prefer a do nothing approach, despite the clear need for a bypass around Arundel.



Appendices



Appendix 1. Completed Consultation Form



Appendix A Highways Report



Appendix A.1 Heritage Report



Appendix 1
Air Quality Report



Appendix A Noise Report

[REDACTED]
Director

[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
Senior Planner

[REDACTED]
[REDACTED]
[REDACTED]

A27 Arundel Bypass

Consultation response form

Share your views

We want to understand your views about the proposed options for improvements to the A27 around Arundel. Please review the consultation materials and share your views with us by completing this response form here or online via www.highwaysengland.co.uk/a27arundel

If you're returning this form to us by post, please send it to: **Freepost A27 ARUNDEL** – no stamp is required.

The consultation period ends at **11.59pm on 24 October 2019** so please ensure your response arrives with us in time, to help us take your comments into account when we are considering the options. Responses received after this time, may not be considered.

- A1.** The first part (sections A-C) of this questionnaire is for you to provide your personal views. If you are responding on behalf of a local business, charity or community organisation, represent a statutory body or are a local elected representative, please ensure you also complete section D of the response form (pages 8-11 shaded in green). This will help us better understand the possible impact of the options on the local economy and communities.

Please let us know whether you are responding as: *(Please tick one only)*

- An individual (please complete **sections A-C** only)
- On behalf of a business/charity/community organisation/statutory body/elected representative – and you have the authority to represent the views of the organisation/elected representative. (please complete **sections A-D**)

- A2.** Please indicate your age group:

- | | | |
|--------------------------------------|--------------------------------------|---|
| <input type="checkbox"/> 18 or under | <input type="checkbox"/> 19-29 | <input type="checkbox"/> 30-39 |
| <input type="checkbox"/> 40-49 | <input type="checkbox"/> 50-59 | <input type="checkbox"/> 60-69 |
| <input type="checkbox"/> 70-79 | <input type="checkbox"/> 80 or above | <input checked="" type="checkbox"/> Prefer not to say |

- A3.** Please provide your home postcode. This will only be used to inform our analysis of responses.

N/A

About the scheme

B1. If all options are brought into an affordable range*, which option would you prefer?

(Please tick one option)

- Cyan (Option 1V5)
- Beige (Option 1V9)
- Crimson (Option 3V1)
- Magenta (Option 4/5AV1)
- Amber (Option 4/5AV2)
- Grey (Option 5BV1)
- Do nothing
- Don't know

B2. The scheme budget is currently £100-250m. Affordability is an ongoing concern and if only Cyan and Beige (Options 1V5 and 1V9) remain affordable, which option(s) would you support?

(Please tick all that apply)

- Cyan (Option 1V5)
- Beige (Option 1V9)
- Do nothing

B3. To what extent do you agree or disagree that there is a need to improve the A27 around Arundel?

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Don't know
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

B4. How concerned are you about the following issues in relation to the existing A27 around Arundel?

(Please select one option in each row)

Issue	Very concerned	Slightly concerned	Not concerned	Don't know	Not applicable
Road safety	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Congestion and delays	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accommodating extra traffic from future housing and economic development without further congestion on the A27	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The effects of A27 traffic on the environment, including the South Downs National Park and air quality	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The separation of local communities	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Access between the A27 and local roads	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Table continues on next page...

*Through securing additional funding, value engineering and contractual efficiencies.

Issue	Very concerned	Slightly concerned	Not concerned	Don't know	Not applicable
The provision of walking, cycling and horse riding facilities around the area	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Difficulty crossing the A27 on foot, cycle or horseback	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Traffic using local roads to avoid the A27 ('rat-running')	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Connections along the coast to other parts of the country	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

B5. Please add any other comments that you may have regarding existing issues:

B6. Please indicate the extent to which you agree or disagree with the following statements when considering your preferred option(s) for improving the A27 around Arundel: *(Please select one option in each row)*

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Don't know
Any new route should be located as closely as possible to the current road through Arundel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Any new route should avoid the South Downs National Park	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Any new route should not cut through local communities	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
'Rat-run' traffic should be removed from unsuitable local roads	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Any improvements should prioritise through traffic	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Maintaining local access to/from the A27 is essential	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

B7. Please indicate which option would... (Please select one option in each row)

	Cyan (Option 1V5)	Beige (Option 1V9)	Crimson (Option 3V1)	Magenta (Option 4/5AV1)	Amber (Option 4/5AV2)	Grey (Option 5BV1)	Don't know	None	Not applicable
Make you feel most safe as a pedestrian, cyclist or horse rider?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Make you feel least safe as a pedestrian, cyclist or horse rider?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Make you feel most safe as a driver?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Make you feel least safe as a driver?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Be best for reducing congestion and delays in Arundel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Be worst for reducing congestion and delays in Arundel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Be best for maintaining/creating a sense of community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Be worst for maintaining/creating a sense of community?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Be best for your enjoyment of the local environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Be worst for your enjoyment of the local environment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Be best for improving access to local services and employment opportunities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Table continues on next page...

	Cyan (Option 1V5)	Beige (Option 1V9)	Crimson (Option 3V1)	Magenta (Option 4/5AV1)	Amber (Option 4/5AV2)	Grey (Option 5BV1)	Don't know	None	Not applicable
Be worst for improving your access to local services and employment opportunities	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Be best for your quality of life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Be worst for your quality of life	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

B8. Taking into consideration what you know about the proposed options, which option would you prefer if all options were brought into an affordable range*?

Please select your preferred options, ranked by **first**, **second** and **third** preference: *(If you have only one or two preferred options, please select accordingly)*

		First preference	Second preference	Third preference
	Cyan (Option 1V5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Beige (Option 1V9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Crimson (Option 3V1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Magenta (Option 4/5AV1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Amber (Option 4/5AV2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Grey (Option 5BV1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Do nothing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Don't know	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

B9. Taking into consideration what you know about the proposed options, please select your **least preferred** (or last choice) option if all options were brought into an affordable range:

		Least preferred/last choice
	Cyan (Option 1V5)	<input checked="" type="checkbox"/>
	Beige (Option 1V9)	<input type="checkbox"/>
	Crimson (Option 3V1)	<input type="checkbox"/>
	Magenta (Option 4/5AV1)	<input type="checkbox"/>
	Amber (Option 4/5AV2)	<input type="checkbox"/>
	Grey (Option 5BV1)	<input type="checkbox"/>
	Do nothing	<input type="checkbox"/>
	Don't know	<input type="checkbox"/>

*Through securing additional funding, value engineering and contractual efficiencies.

B10. Please add any other comments about the proposed options:

Please see accompanying representation.

About the consultation

C1. How did you find out about the consultation? *(Please tick all that apply)*

- Letter through the door
- Local newspaper advert
- West Sussex County Council website or email
- Arun District Council website or email
- Highways England website or email
- Online news
- Other website (please provide details below)
- Local radio
- Local television
- Local newspaper
- Poster
- Local community group
- Public notice
- Social media
- Word of mouth
- Other (please provide details)

C2. Have you found the consultation materials useful in answering your questions about the A27 around Arundel?

- Yes
- To a certain extent
- No

C3. Have you visited one of our public consultation events, or do you intend to?

- Yes, have visited Intend to visit No

Details of upcoming events can be found at www.highwaysengland.co.uk/a27arundel

C4. If you have visited an exhibition, how useful did you find it in terms of addressing your questions about the options for improving the A27 around Arundel? *(Please tick one option)*

Very useful	Useful	No feeling either way	Not useful	Not at all useful	Don't know	Not applicable
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

C5. Do you have any other comments about the consultation process or materials?

Keep up-to-date with the project

If you would like to receive updates on the A27 Arundel Bypass, please subscribe via our project webpage: www.highwaysengland.co.uk/a27arundel

Thank you for completing this consultation response form.

Some specific questions for organisations continue over the page.

Your data, your rights

On 25 May 2018, the General Data Protection Regulations (GDPR) became law. The law requires Highways England to explain to you – consultees, stakeholders and customers – how your personal data will be used and stored.

Highways England adheres to the government's consultation principles, the Planning Act 2008 and the Highways Act 1980 as required, and may collect personal data to help shape development of highways schemes.

Personal data collected by the project team will be processed and retained by

Highways England and its appointed contractors until the scheme is complete.

Under the GDPR regulations you have the following rights:

- Right of access to the data (Subject Access Request)
- Right for the rectification of errors
- Right to erasure of personal data – this is not an absolute right under the legislation
- Right to restrict processing or to object to processing
- Right to data portability

If, at any point, Highways England plans to process the personal data we hold for a purpose other than that for which it was originally collected, we will tell you what that other purpose is. We will do this prior to any further processing taking place and we will include any relevant additional information, including your right to object to that further processing.

You have the right to lodge a complaint with the supervisory authority, the Information Commissioners Office.



If you'd like more information about how we manage data, or a copy of our privacy notice, please contact: DataProtectionAdvice@highwaysengland.co.uk

Organisation-specific questions

We are keen to gather the views of businesses/charities/community groups/statutory bodies/elected representatives to ensure that they are fairly represented in the assessment of the consultation.

In addition to the main questionnaire, we are asking representatives of these organisations to help us by answering the following questions:

D1. Please state the name of the organisation you are responding on behalf of, along with your organisation's website address:

The Norfolk Estate
BN18 9AS

D2. Please confirm you have the authority to respond on behalf of your organisation:

Yes No

D3. In which capacity are you responding on behalf of the organisation?

Owner/partner Director
 Manager Other (please specify below)

D4. How many people do you/does your organisation employ or represent in the Arundel/A27 area?

1-10 11-49
 50-99 100-249
 250 or more Not applicable

D5. In which sector does your organisation operate?

Agriculture Charity/voluntary sector Construction
 Education Energy/utilities Finance
 Healthcare Hospitality Leisure/tourism
 Manufacturing Retail Transport or logistics
 Other (please specify below)

D6. What are the key challenges faced by your organisation in relation to the A27 around Arundel?
(Please tick all that apply)







- | | |
|--|---|
| <input checked="" type="checkbox"/> Congestion | <input checked="" type="checkbox"/> Journey times |
| <input type="checkbox"/> Journey time reliability | <input type="checkbox"/> Quality of road/infrastructure |
| <input type="checkbox"/> Access to/from A27 | <input checked="" type="checkbox"/> Loading/unloading |
| <input type="checkbox"/> Parking | <input checked="" type="checkbox"/> Impact on local roads/'rat-running' |
| <input type="checkbox"/> Lack of up to date information (variable message signing - VMS) | |
| <input type="checkbox"/> Safety | <input type="checkbox"/> Air quality |
| <input checked="" type="checkbox"/> Economic impacts | <input type="checkbox"/> Impact of incidents |
| <input type="checkbox"/> None | <input type="checkbox"/> Other – please provide details below |

D7. Please provide more details of how current issues with the A27 around Arundel affect your organisation:

D8. How important is the A27 around Arundel to your organisation's operations?

Very important <input checked="" type="checkbox"/>	Important <input type="checkbox"/>	Neither important nor unimportant <input type="checkbox"/>	Unimportant <input type="checkbox"/>	Very unimportant <input type="checkbox"/>	Don't know <input type="checkbox"/>
---	---------------------------------------	---	---	--	--







D9. Which option (if any) would have the most significant impact on your organisation during construction?
(Please select one only)

<input checked="" type="checkbox"/>		Cyan (Option 1V5)
<input type="checkbox"/>		Beige (Option 1V9)
<input type="checkbox"/>		Crimson (Option 3V1)
<input type="checkbox"/>		Magenta (Option 4/5AV1)
<input type="checkbox"/>		Amber (Option 4/5AV2)
<input type="checkbox"/>		Grey (Option 5BV1)
<input type="checkbox"/>		No difference
<input type="checkbox"/>		Don't know

D10. Please explain the reasons for your selection:

Please see accompanying representation.







D11. Which option (if any) would most benefit your organisation once built? (Please select one only)

<input type="checkbox"/>		Cyan (Option 1V5)
<input type="checkbox"/>		Beige (Option 1V9)
<input type="checkbox"/>		Crimson (Option 3V1)
<input checked="" type="checkbox"/>		Magenta (Option 4/5AV1)
<input type="checkbox"/>		Amber (Option 4/5AV2)
<input type="checkbox"/>		Grey (Option 5BV1)
<input type="checkbox"/>		No difference
<input type="checkbox"/>		Don't know

D12. Please explain the reasons for your selection:

Please see accompanying representation.

D13. Which option (if any) would least benefit your organisation once built?
(Please select one only)

<input checked="" type="checkbox"/>		Cyan (Option 1V5)
<input type="checkbox"/>		Beige (Option 1V9)
<input type="checkbox"/>		Crimson (Option 3V1)
<input type="checkbox"/>		Magenta (Option 4/5AV1)
<input type="checkbox"/>		Amber (Option 4/5AV2)
<input type="checkbox"/>		Grey (Option 5BV1)
<input type="checkbox"/>		No difference
<input type="checkbox"/>		Don't know

D14. Please explain the reasons for your selection:

Please see accompanying representation.

**Thank you for completing this
consultation response form.**

A27 Arundel Bypass

Review of Traffic Modelling and Operational Assessments of Scheme Options



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Issue	Issue date	Compiled	Checked	Authorised
ISSUE 1	15 th October 2019	RN	LNS	LNS
FINAL	16 th October 2019	RN	LNS	LNS

Compiled by:

[Redacted]

Checked by:

[Redacted]

Authorised by:

[Redacted]

1 Introduction

- 1.1 GTA Civils and Transport have been commissioned by Savills/Lord Henry Arundel to undertake a review of the traffic modelling undertaken by Highways England (HE) in support of its proposal to construct an A27 Arundel bypass.
- 1.2 The review has considered the following:
- Regional Investment Programme - A27 Worthing-Lancing and Arundel Improvements - PCF Stage 1 - Traffic Data Collection Report - September 2016;
 - Combined Modelling and Appraisal Report – A27 Arundel Bypass – PCF stage 2 Further Consultation – August 2019 (CoMAR);
 - A27 Arundel Bypass – Scheme Assessment Report – May 2018 (SAR);
 - Scheme Assessment Report Erratum September 2019, A27 Arundel Bypass; and
 - A27 Arundel Bypass – Further Public Consultation – Consultation Brochure revised 13 September 2019.
- 1.3 PCF2 is the Option Selection Stage of scheme development. Scheme options are:
- Option 1V5 (Cyan) – new dual-carriageway route from a grade-separated Crossbush roundabout to west of the Ford Road roundabout, with a flyover over the Ford Road roundabout and no connection to local roads at the Ford Road roundabout;
 - Option 1V9 (Beige) – new dual-carriageway route from a grade-separated Crossbush roundabout to Ford Road roundabout which would be reconfigured as an enlarged signalised ‘throughabout’ junction;
 - Option 3V1 (Crimson) – new dual-carriageway route from a grade-separated Crossbush roundabout to the south of the existing A27, ending just west of Havenwood Park;
 - Option 4/5AV1 (Magenta) – new dual-carriageway route from a grade-separated Crossbush roundabout to the south of the existing A27 ending just west of the existing A27 / B2132 Yapton Lane junction;
 - Option 4/5AV2 (Amber) – new dual carriageway route from a grade-separated Crossbush roundabout to the south of the existing A27 ending just west of the existing A27 / Yapton Lane junction (alignment differs from 4/5AV1 in the Binsted area); and
 - Option 5BV1 (Grey) – new dual-carriageway route from a grade separated Crossbush roundabout to the south of the existing A27 ending east of the existing A27 / A29 Fontwell (east) roundabout.
- 1.4 Effectively, the Cyan and Beige Options are shorter new routes close to the existing A27 relief road alignment through Arundel; and the Crimson, Magenta, Amber and Grey are longer new routes to the south of the existing A27 alignment through Arundel.
- 1.5 A common theme running through all technical modelling documents and the Consultation Brochure is the acknowledgement that the existing A27 through Arundel currently suffers from congestion, delays, journey time unreliability, and accidents with considerable volumes of traffic

using other routes (the A283 / B2139 through Storrington to the north and the A259 to the south) to avoid this section of A27. The CoMAR identifies particular issues relating to the Crossbush roundabout (stated to be over capacity in the 2015 base year), the Ford Road roundabout (stated to be approaching capacity in the base year) and the section of A27 between Crossbush roundabout and Causeway roundabout (stated to be over capacity in the base year). The section of A27 between the Ford Road roundabout and the Causeway roundabout is described as having spare capacity in the base year. Whilst in terms of its link capacity (i.e. ability to carry flows) this is technically correct, this ignores the over-riding influence of significant capacity limitations at the junctions at either end – the junctions control the operation of the link with consequential queueing in both directions.

- 1.6 In contrast, the dual carriageway sections of A27 to east and west of Arundel are described as having ample spare capacity to cater for existing and future traffic demands, a comment with which we would concur.

2 Modelling Background

- 2.1 All modelling has been carried out for traffic and highways only. No multi-modal modelling has been undertaken. The A27 Arundel Bypass – PCF Stage 2 Multi-Modal Study, Highways England (August 2017) concluded that:

"Neither the South East Route: Sussex Area Route Study or the London and South Coast Rail Corridor Study recommended improvements in the Arundel area as a priority, nor found them to offer good value for money".

"Since no significant improvements are planned for the Coastway Services it is unlikely that the rail network alone will be able to support the regional growth aspirations along the corridor."

"People travelling on foot will remain similar to current levels of approximately 10%. Furthermore, the combination of through traffic (67%) and local traffic (33%) using the A27 means that walking (...and cycling...) will not always be a suitable alternative to car travel."

- 2.2 The report concluded that;

"In summary, there is no evidence to suggest that there would be any material switch from road to rail along the A27 corridor between Chichester and Brighton that would reduce congestion at Arundel."

- 2.3 We concur with that conclusion.

- 2.4 The original A27 Arundel Bypass 2016 modelling was based on a conventional approach founded on new data collection (traffic volumes and origin / destination patterns by Roadside Interview Surveys). Subsequent, and all current modelling, draws upon the later South East Region Traffic Model (SERTM), using a sub-set of the model to contain and model the A27 at Arundel and other roads that may be impacted by the provision of an Arundel Bypass.

- 2.5 The SERTM highway network is agreed as being appropriate for assessing traffic flows in the Arundel Bypass study area. The model, however, has a relatively coarse zoning system which required splitting of some SERTM zones within the Arundel study area to enable realistic modelling of routes taken to access various parts of the town. The split zones are themselves still somewhat coarse, but we consider them to be adequate for the purposes of this study.

- 2.6 A concern about the SERTM model, however, particularly in relation to its use in the A27 Arundel context, is that the model represents an average March weekday, with traffic demands represented by an average of 3 hours (i.e. the average hour between 0700 and 1000 for the AM peak, and the average of 1600-1900 for the PM peak). This is a conventional approach ensuring that scheme assessments and designs provide for the majority of the year, accepting a degree of congestion for

a small portion of the year. In a location such as Arundel, this is likely to under-estimate the extent through the year when traffic demands, and flows at key junctions, could be considerably higher. (but see also paras 3.13-3.15 of this report, which reports on where some sensitivity testing of that aspect has been carried out).

- 2.7 The modelling includes variable demand which takes account of the potential for additional highway trips to be generated if congestion is relieved, and vice versa. The CoMAR identifies the variable demand effects to be very small in the context of this scheme, a conclusion we would concur with.
- 2.8 Forecasting of future traffic demands follows the standard proscribed approach (WebTAG – the DfT guidelines for scheme assessment), taking account of general growth from forecast changes in households, employment, car ownership and socio-economic factors (TEMPRO / NTEM / NTM) and specific account of committed and planned major developments and highway network changes. This is agreed as the correct approach for a national infrastructure scheme such as this.
- 2.9 The modelling undertaken and reported in CoMAR and SAR is generally acceptable. The reports acknowledge that the strategic model results for the operation of key junctions would need more detailed junction performance modelling to provide more clarity on junction performance and design requirements. That more detailed modelling has been carried out and reported in both documents. Although only summary results from such detailed modelling are included in the reports (rather than the detailed model input / output files) there is no reason to suspect that the detailed modelling has any fundamental issues.

3 Review of Model Results

- 3.1 The Consultation Brochure presents traffic flow data for each scheme Option in terms of AADT (Annual Average Daily Traffic). The Brochure AADT information does not however include data for some important highway sections which would have aided understanding of the overall picture, those being A27 east of Crossbush roundabout, A284 south of Crossbush roundabout, A27 west of the Fontwell (east) roundabout, the A283 / B2139 route through Storrington, and data for any section of A259. It would also have been helpful if the data presented included the base year for comparison.
- 3.2 Much emphasis is properly placed in the scheme reporting, including in the Consultation Brochure, on the impacts on the alternative route through Storrington, with existing issues greatly exacerbated in a design year 'Do Minimum' and reduced in all scheme Options. It is notable, however, that the consequences of 'Do Minimum' scenario for the proposed A284 Lyminster Bypass and the existing A259 are potentially substantial (as reported in the modelling reports) but not explicitly reported in the same way in the consultation material.
- 3.3 Base year (2015) flows on the existing A27 are reported in CoMAR as being 32900 AADT between Crossbush and Causeway roundabouts, and 24600 AADT between Causeway and Ford Road roundabouts. Design year forecast flows on the new section of A27 for all scheme Options lie between 40-50000 AADT.
- 3.4 Treated as a rural road (DMRB TA46/97 Annex D), the capacity of a dual carriageway would be between 60-70000 AADT. The capacity of a rural single 7.3m carriageway would be expected to have a Congestion Reference Flow of about 20-25000 AADT (Congestion Reference Flow is the value for AADT on a rural road above which peak hour flows would not be able to be accommodated acceptably, on a purely link capacity basis without taking any junction constraints into account).
- 3.5 Treated as an urban road (DMRB TA79/99), the capacity of all scheme options would be about 50-55000 AADT as a dual carriageway, and about 26-30000 as a 7.3m single carriageway.
- 3.6 Whether treated as a rural or an urban road, the existing A27 through Arundel is therefore at or near capacity in terms of link capacity alone. A single carriageway new A27 (whether treated as rural or urban) would offer substantially less capacity than the demand traffic flow forecasts require in the design year. Only a new dual carriageway would provide sufficient capacity.
- 3.7 AADT data only presents part of the relevant whole picture. For this scheme key model results are for junction performance in the peak hours.

- 3.8 Western terminal junctions for the longer route Options all show no capacity issues in the design year and this is agreed.
- 3.9 The key junctions are Crossbush roundabout and the Ford Road roundabout which suffer from substantial traffic related issues at present, which are forecast in the modelling reports to substantially worsen by the design year (2041).
- 3.10 Crossbush roundabout, which suffers from extensive queue and delay issues at present, when fully grade-separated as included in all scheme Options is forecast to operate within capacity under all Options in the design year. This conclusion is agreed.
- 3.11 The CoMAR report identified major issues of over-capacity demands at the Ford Road roundabout in the Do Minimum scenario in the design year (2041). By taking out all the A27 through traffic, all of the longer routes and Option 1V5 (Cyan) of the shorter routes would deal to varying degrees with the existing and future issues at the Ford Road roundabout and provide sufficient capacity to operate acceptably in the design year. The Consultation Brochure (Benefits and Impacts table, pages 16 and 17) states that for all of those scheme Options, the A27 would be operating at around 45-60% capacity in the 2041 design year.
- 3.12 Option 1V9 (Beige) would however retain the Ford Road junction with the A27. The scheme proposed to cater for the design year traffic demands is a signalised 'throughabout'. Signalisation of a roundabout is generally considered a 'last resort' to extract the maximum capacity from a roundabout. The 'throughabout' concept attempts to minimise the delays imposed on through traffic (in this case A27 through traffic) and amounts to a 'last throw of the dice'. Any such design option must be demonstrated to be acceptable beyond reasonable doubt. However, the capacity assessment presented in CoMAR shows one key movement (A27 eastbound at an internal stopline) to be at capacity in the PM peak in the design year. The Consultation Brochure Benefits and Impacts table shows that this scheme Option would operate substantially less well than the other scheme Options, with the A27 operating at around 85-90% capacity in the 2041 design year.
- 3.13 As noted in para 2.6 above, the standard modelling approach for junction assessment in this case is based on average March weekday and average peak hour (e.g. average of 0700-1000 representing the AM peak). In a location such as Arundel, this is likely to under-estimate the extent through the year when traffic demands, and flows at key junctions, could be considerably higher. In recognition of this, the CoMAR included an 'Operational Sensitivity Test' which was described as "*a sensitivity test to reflect the difference between average peak period and highest peak hour flows*". An uplift factor of +11.5% was applied. The derivation of the factor is not explained and we have reservations about the value used if intended to uplift to 'highest peak hour'.

- 3.14 The sensitivity testing showed that the Ford Road roundabout would operate slightly over-capacity in Options 4/5AV2 and 5BV1, though it considered that the issues could be mitigated through design modifications in future stages of scheme development.
- 3.15 Crucially, for Option 1V9, the Ford Road 'throughabout' signalised roundabout would operate extremely poorly in the PM peak in the design year, with a -11.6% PRC (practical reserve capacity). The report commented *"It is considered that this would be challenging to mitigate through further design development without significant impact upon adjacent land use."*

4 Vulnerable Road Users

- 4.1 A significant omission from the Consultation Brochure is a proper assessment of the impacts on vulnerable road users (pedestrians, cyclists, equestrians), for the existing and forecast Do Minimum scenarios and for any of the scheme Options. The only references in the Consultation Brochure appear to be a short single sentence on page 11, and within the Population and Health part of the table in the Environmental Context section. This table entry simply notes that there would be *"moderate adverse effects on permanent road and public right of way diversions or closures which result in changes in journey length or severance"* and ascribes the same conclusion as applicable to all scheme Options.
- 4.2 In our view, the two inner route Options – 1V5 (Cyan) and 1V9 (Beige) - would have substantially greater such impacts in the vicinity of the Ford Road roundabout than any of the other scheme Options; in particular this applies to Option 1V9 with the proposed 'throughabout' arrangement.

5 Accidents and Safety

- 5.1 The Consultation Brochure includes a summary of accidents savings arising from the scheme Options. The underpinning analysis would have been based on total study area network accidents and have taken into account the forecast number of accidents at junctions along the routes and along the new routes themselves, compared to the forecast number on an unimproved network.
- 5.2 The number of accidents over the assessment period have been calculated using a standard approach common to all Highways England schemes, and which we have no concerns. The conclusions are summarised in the Benefits and Impacts table on pages 16 and 17 of the Consultation Brochure. That shows savings for all scheme Options, but considerably greater with the longer outer routes – 4/5AV1 (Magenta), 4/5AV2 (Amber) and 5BV1 (Grey). For those, 4/5AV2 (Amber) is forecast to result in savings greater than 4/5AV1 (Magenta) solely because the Amber route is shorter between the common start / finish points of those scheme Options (its shorter length would result in fewer accidents on the new road and consequential higher savings). Accident savings for the 5BV1 (Grey) scheme Option falls between those for the Amber and Magenta scheme Options, the combination result of its longer length and longer length of existing A27 bypassed.
- 5.3 These summarised results, in terms of scheme Option comparisons, are entirely consistent with what we would expect, though it is not possible to comment on the accuracy of the absolute numbers of accident savings forecast.
- 5.4 It is notable, however, that the assessment is carried out over a 60 year period (as is standard) from scheme assumed opening year of 2026 to 2085. The table text reveals that the total number of accidents over that period in the 'Do Minimum' scenario would be 55,484. The highest number of accidents saved over that period is 727 for the 4/5AV2 (Amber) scheme Option, amounting to only a 1.5% reduction.
- 5.5 In the economic assessment of the scheme Options, savings in the number of accidents, as well as changes in their severity, would have been taken into account. However, the contribution of accident savings to overall monetarised scheme benefits would likely be small in comparison to other benefits and costs.

6 Summary

- 6.1 All modelling has been carried out for traffic and highways only. No multi-modal modelling has been undertaken, citing the conclusions of the A27 Arundel Bypass – PCF Stage 2 Multi-Modal Study, Highways England (August 2017), with which we concur.
- 6.2 The modelling undertaken and reported in CoMAR and SAR is generally acceptable.
- 6.3 The modelling includes variable demand and forecasting of future traffic demands follows the standard proscribed approach in WebTAG.
- 6.4 The reports acknowledge that the strategic model results for the operation of key junctions would need more detailed junction performance modelling to provide more clarity on junction performance and design requirements. That more detailed modelling has been carried out and reported in both documents. Although only summary results from such detailed modelling are included in the reports (rather than the detailed model input / output files) there is no reason to suspect that the detailed modelling has any fundamental issues. There are concerns, however, about the use within the model of average March weekday and average peak hour as, in a location such as Arundel this is likely to under-estimate the extent through the year when traffic demands, and flows at key junctions, could be considerably higher.
- 6.5 Whether treated as a rural or an urban road, the existing A27 through Arundel is demonstrated to be currently at or near capacity in terms of link capacity alone. A single carriageway new A27 (whether treated as rural or urban) would offer substantially less capacity than the demand traffic flow forecasts require in the design year. Only a new dual carriageway would provide sufficient capacity. This is based on daily flows expressed as AADT (Annual Average Daily Traffic).
- 6.6 AADT data only presents part of the relevant whole picture. For this scheme key model results are for junction performance in the peak hours. The key junctions are Crossbush roundabout and the Ford Road roundabout which suffer from substantial traffic related issues at present, which are forecast in the modelling reports to substantially worsen by the design year (2041).
- 6.7 Crossbush roundabout, which suffers from extensive queue and delay issues at present, when fully grade-separated as included in all scheme Options is forecast to operate within capacity under all options in the design year. This conclusion is agreed.
- 6.8 By taking out all the A27 through traffic, all of the longer routes and Option 1V5 (Cyan) of the shorter routes would deal to varying degrees with the existing and future issues at the Ford Road roundabout and provide sufficient capacity to operate acceptably in the design year. The proposed

‘throughabout’ signalised junction in Option 1V9 (Beige) would not, with barely sufficient capacity to cater for average demand and substantial over-capacity issues in dealing with peak demands.

- 6.9 No proper assessment has been presented in the Consultation Brochure of the impacts on vulnerable road users (pedestrians, cyclists, equestrians) of any of the scheme Options. In our view, the two inner route Options – 1V5 (Cyan) and 1V9 (Beige) - would have substantially greater such impacts in the vicinity of the Ford Road roundabout than any of the other scheme Options, in particular Option 1V9 with the proposed ‘throughabout’ arrangement.
- 6.10 The outer routes offer significant traffic advantages compared to the inner routes, relieving the town of a substantial volume of existing and future through traffic. Of the inner routes Option 1V9 would perform much less well, with capacity issues at the proposed ‘throughabout’ signalised junction at the Ford Road roundabout, and greater impact on vulnerable road users.
- 6.11 All scheme Options would result in savings in the number of accidents compared to the ‘Do Minimum’ situation. Greater savings would result from the longer outer options – 4/5AV1 (Magenta), 4/5AV2 (Amber) and 5BV21 (Grey) than for all others, but the savings would represent only a maximum 1.5% reduction compared to the ‘Do Minimum’ and would likely be small in comparison to other monetarised benefits and costs in overall scheme economic assessments.



Civil Engineering - Transport Planning - Flood Risk

GTA Civils & Transport, Gloucester House, 66a Church Walk, Burgess Hill, West Sussex, RH15 9AS

T: 01444 871444 E: enquiries@gtacivils.co.uk www: gtacivils.co.uk

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Public Consultation A27 Arundel Bypass

Heritage Statement



Project: Public Consultation A00 Arundel Bypass

Client: The Duke of Norfolk's Estate

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Prepared by: [REDACTED] Senior Heritage Consultant/Heritage Planning	Signed: [REDACTED]
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Checked by: [REDACTED] IHBC/MRTPI Director/Head of Heritage Planning	Signed: [REDACTED]
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Abbreviations and Conventions used in the text

c.	circa	LPA	Local Planning Authority
CA	Conservation Area	m	metres
ha	hectares	NGR	National Grid Reference
HA	Heritage Asset	NHLE	National Heritage List for England
HE	Historic England	NPPG	National Planning Practice Guidance
HER	Historic Environment Record	NPPF	National Planning Policy Framework
km	kilometres	RPG	Registered Park and Garden
LB	Listed Building		

Assumptions and Limitations

This report is compiled using primary and secondary information derived from a variety of sources only some of which have been directly examined. The assumption is made that this data as well as that derived from other secondary sources is reasonably accurate.

This report is also compiled using HER data available via West Sussex County Council obtained on 1 October 2019.

Compliance

This document has been prepared in accordance with the requirements stated within the National Planning Policy Framework (NPPF) (Ministry of Housing, Communities & Local Government 2019) National Planning Practice Guidance (NPPG) (Ministry of Housing, Communities & Local Government 2019) and the Chartered Institute for Archaeologists' Standard and guidance for historic environment desk-based assessment and Standard and guidance for commissioning work on or providing consultancy advice on archaeology and the historic environment (Chartered Institute for Archaeologists December 2017).

1.0 Introduction

1.1 Project Background

1.1.1. This Heritage Statement has been researched and prepared by Savills Heritage Planning to provide relevant and proportionate information to assess the significance of the historic environment in the town of Arundel, West Sussex and the surrounding landscape in order to set out the potential impact of the six proposed options for the A27 Arundel Bypass scheme as set out in Highways England's 'Further public consultation' document, which forms part of the Public Consultation being undertaken (30 August to 11 October 2019). The Heritage Statement focuses on the key designated heritage asset of the Grade I Listed Arundel Castle, notably the significance of the asset and the impacts that the proposed scheme options may have upon its significance. It also considers the character and appearance of the Arundel Conservation Area and the potential impacts of the proposed scheme options on this.

1.1.2. As part of the Public Consultation exercise, Highways England have provided an Environmental Assessment Report (August 2019) of which Chapter 6 'Cultural Heritage' is relevant to this report. The assessment outlines the impacts of the construction and operational phases on the setting of heritage assets and the below-ground archaeology against each proposed scheme option.

1.2 The proposed options and their wider vicinity

1.2.1. The proposed options for the A27 Arundel Bypass comprise six routes varying from c. 1.5km to c. 3.5km in length all extending from the existing A27 to the east of Arundel at its junction with the A28 passing south of Arundel Station and either passing through the centre of Arundel along the existing A27 (options 109 and 110) or south of the town south of Tortington Priory which is located c. 1.5km beyond the town. All the options remain the existing A27 at points to the west of Arundel.

1.2.2. Highways England has published a further Public Consultation document and additional information is available on the Highways England website which sets out the proposed route options and further assessment.

1.2.3. The town of Arundel is located largely to the immediate west of the River Aron being surrounded to the east, west and north by the South Downs National Park. It is situated at the southern end of a gap in the

South Downs at the end of a doeland spur which projects onto the floodplain of the river which runs to the coast at Littlehampton c. 6km to the south. The town rises steeply from the south to the north the land to the south and east of the town comprising large areas of low lying floodplain and the northern end of High Street and along London Road at an elevation of c. 1m aOD. Arundel Castle situated on man-made earthworks to the north-east of the town affords the Castle and grounds a similar elevation the former bailey upon which the 11th century shell keep is located provides a slightly higher elevation. The elevation of the town and the features within it contrasts to the low lying valley of the River Aron to the south providing wide ranging views toward and out from the Castle notably from and to the south and east.

1. Figure 1 indicates the location of the routes of the six proposed options and the wider vicinity around Arundel (also see Figure 8)

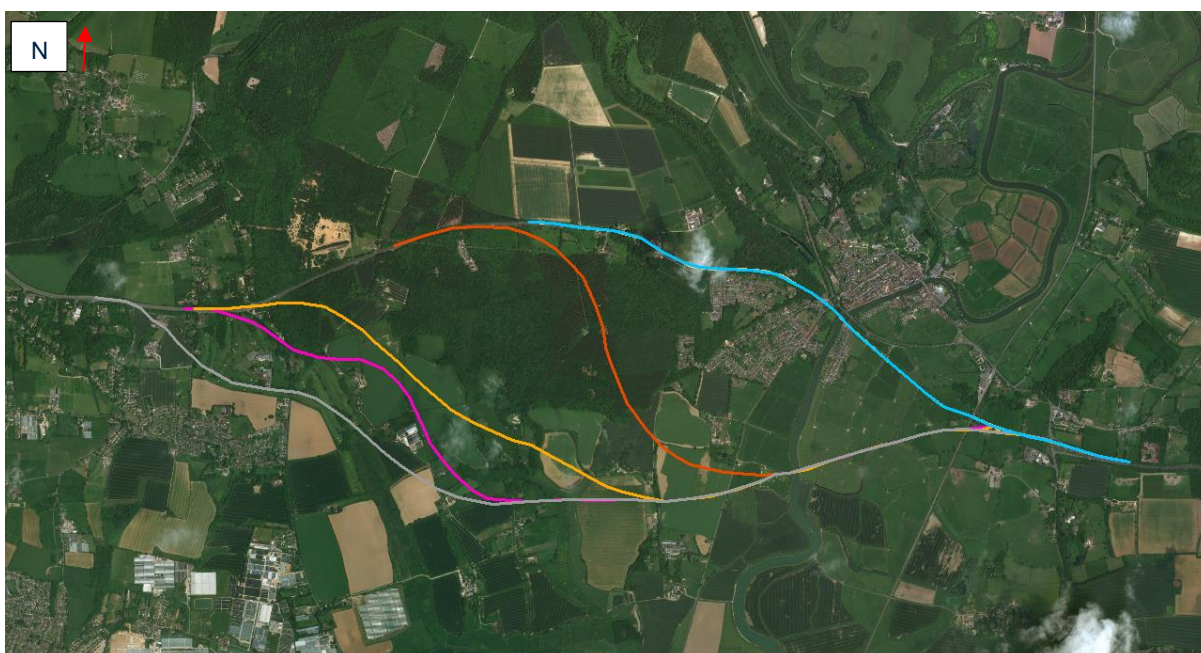


Figure 1: Aerial image of the Arundel and wider landscape

1. The town of Arundel contains several nationally important heritage assets including the Grade I Listed Arundel Castle (NHLE number 10009000) located within a Grade II Registered Park and Garden (Arundel Castle) (NHLE number 10001000). Arundel Castle is also located within the Arundel Castle Scheduled Monument (NHLE number 10100000). Much of the town is located to the north of the existing A8 and contained between the River Aron to the south-east and the A8 London Road to the west

forms the Arundel Conservation Area.

- 1.1.1 The Arundel Conservation Area contains nearly 100 Listed buildings or structures of which a further three are Grade I Listed (the Roman Catholic Cathedral of St Philip Neri (NHLE number 100809) the Church of St Nicholas (NHLE number 100091) and the Fitzalan Chapel (NHLE number 100081) and five are Grade II Listed. Arundel District Council has not adopted a Conservation Area Appraisal or Assessment of Arundel (hereafter the Conservation Areas Supplementary Planning Guidance) adopted in October 2011 includes a brief description of the character and appearance of Arundel Conservation Area.
- 1.1.2 Arundel contains a further 100 or so buildings or structures identified as of 'special character', that is, whilst not designated they are recognised as being of outstanding design, appearance or special interest, good examples of traditional style buildings which contribute to the local townscape of high historical associations, are largely intact and not adversely affected by later alterations, and make a positive contribution to their surroundings or streetscene (Buildings of Structures of Character Supplementary Planning Document adopted September 2011 Arundel District Council).
- 1.1.8 Figure 1 at the end of the report indicates the key heritage assets within Arundel and the surrounding landscape.

2.0 Methodology

2.1 Aims, objectives and scope

- 2.1.1 The purpose of this Heritage Statement is to determine as far as is reasonably possible from existing records an understanding of the historic environment resource in order to
1. Provide a heritage baseline assessment to understand the archaeological and historical background to the proposed development site
 2. Formulate an assessment of the importance/sensitivity of the known or potential heritage assets considering their archaeological, historic, architectural and artistic interests and
 3. Formulate an assessment of the impact of the proposed development on the significance of the known heritage assets and their settings.

2.2 Assessment Methodology

- 2.2.1 Local planning authorities require an applicant to provide an assessment of the significance of any heritage assets affected by a development proposal including any contribution made by their setting. This includes designated and non-designated assets.
- 2.2.2 The importance/sensitivity of some heritage assets is formally recognised through designation (Scheduling of a monument or the Listing of a built structure for example). The following terminology has been adopted within this assessment for classifying and discussing the historic environment
1. A **Heritage Asset** is a building, monument, site, place, area or landscape identified as meriting consideration in planning decisions because of its heritage interest (NPPF, Annex Glossary)
 2. The **Setting** of a heritage asset is the surroundings in which a heritage asset is experienced. Its extent is not fixed, can extend beyond the asset's curtilage and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral (NPPF, Annex Glossary)
 3. **Significance** for heritage policy as defined in the NPPF (Annex Glossary) is used to describe the heritage interest of an asset to this and future generations. This interest may be archaeological, architectural, artistic or historic. Significance derives from not only a heritage

asset's physical presence, but also from its setting.

Value is used in reference to the components of a heritage asset that determines its significance.

Guidance provided by Historic England in the document Conservation Principles, Policies and Guidance for the sustainable management of the historic environment (English Heritage 2008) introduced the concept of values when weighing the significance of heritage assets with reference to the following value criteria (bracketed terms indicate corresponding values identified in NPPF)

1. **Evidential** (Archaeological) value. Deriving from the potential of a place to yield evidence about past human activity. This value is alternatively known as **Research** value.

2. **Historical** value. Deriving from the ways in which past people, events and aspects of life can be connected through a place to the present. It tends to be illustrative or associative. This value is alternatively known as **Narrative** value.

3. **Aesthetic** (Architectural or Artistic) value. Deriving from the ways in which people draw sensory and intellectual stimulation from a place.

4. **Communal** value. Deriving from the meanings of a place for the people who relate to it or for whom it figures in their collective experience or memory. Communal values are closely bound up with historical (particularly associative) and aesthetic values but tend to have additional and specific aspects.

The criteria for assessing the importance of heritage assets in terms of their evidential, historical, aesthetic and communal values are set out in more detail in Appendix 1.

Historic England produced a Conservation Principles consultation draft in 2010 which provided a revised concept of values for assessing significance of heritage assets. These interests were identified as historical, archaeological and architectural and artistic interest. Recently revised national planning policy guidance (NPPG July 2019) in relation to the historic environment provides a similar interpretation of assessing significance.

Assessment of Setting

Historic England has issued Historic Environment Good Practice Advice in Planning guidance notes of which *Good Practice Advice Note 2 – Managing Significance in Decision-Taking in the Historic*

Environment (March 2015) and Good Practice Advice Note 3 (2nd Ed.) – The Setting of Heritage Assets (December 2017) are relevant to the proposals at the proposed development site.

- The Historic England Guidance advocates a systematic and staged approach to the assessment of the implications of development in terms of their effects on the settings of heritage assets.
- 8 **Step 1** of the approach is *'identifying the heritage assets affected and their settings'*. This initial step is carried out by undertaking documentary research and assessing data sourced from the HER and national heritage datasets.
- 9 **Step 2** requires consideration of *'whether, how and to what degree these settings make a contribution to the significance of the heritage asset(s)'*. The guidance states that this stage of the assessment should first address the key attributes of the heritage asset itself and then consider i) the physical surroundings of the asset including its relationship with other heritage assets ii) the way the asset is appreciated and iii) the asset's associations and patterns of use.
- 10 **Step 3** involves *'Assessing the effect of the proposed development on the significance of the asset(s)'*. This stage of the assessment addresses the key attributes of the proposed development such as its i) Location and siting ii) Form and appearance iii) Additional effects and iv) Permanence.
- 11 **Step 4** of the guidance should explore opportunities for *'maximising enhancement and minimising harm'* while **Step 5** is to *'make and document the decision and monitor outcomes'*. For the purposes of this assessment **Steps 1-4** of the process have been followed. **Step 5** is the duty of the Local Planning Authority and therefore not undertaken as part of this assessment.

Historical and Archaeological Baseline

- 1□ Baseline conditions were established through consideration of the historic environment within the vicinity of the Site and a desk-based review of existing sources of publicly accessible primary and synthesised information comprising

- 1□ National heritage datasets including The National Heritage List for England (NHLE) Images of England and Britain from Above
- The West Sussex Historic Environment Record received 10 October 2019
- Conservation Areas Supplementary Planning Guidance (Arundel District Council) adopted October

□□□□

- The Arundel Historic Character Assessment Report□part of the Sussex□Extended Urban Survey□
March 2009□and
- Historic manuscripts and maps available online.

□.□.1□ A site visit and walkover were undertaken on 2 August 2019 to inform the understanding of Arundel Castle□and those heritage assets within the vicinity which may be sensitive to the proposed scheme options.

□.□.1□ A bibliography of documentary□architectural and cartographic sources consulted is included in the **References** section of this report.

3.0 Historic development

3.1 Introduction

3.1.1 The following section provides a brief summary of the historical development of Arundel and its environs compiled from sources as listed in the References and drawing on previous studies in the area surrounding the Site.

3.1.2 Understanding the history and context of the relevant heritage assets is important to establish their setting and the contribution that their setting makes to their significance. Historic England guidance on the setting of heritage assets advises that while this matter is primarily a visual assessment there are other factors such as historical associations and relationships that define settings and contribute to significance.

3.2 Historic Development of Arundel

3.2.1 There is comparatively limited evidence provided by the West Sussex HER for settlement at Arundel in the prehistoric period, however as in later periods, Arundel's location, topography and proximity to resources would have been attractive to humans prior to the Roman invasion in the 1st Century AD. Occupation is known within Arundel in the Romano-British period the site of a villa with a pavement and heated room is known at Tarrant Street West Sussex HER reference M0509000 south of the route of a Roman road the route of which is echoed in the existing roads through the town Green Street Maltravers Street A00 Chichester Road West Sussex HER.

3.2.2 It is suggested that Arundel developed as an Anglo-Saxon burh in the late 9th century or early 10th century again taking advantage of or in response to the town's location and access to resources notably its proximity to the coast and access to international trade via the River Aron. Clergy at what was probably a minster church in the Anglo-Saxon period are recorded in the Domesday Book of 1086 alongside four burgesses further indicating the existence of the settlement prior to the Norman invasion of 1066. In 1086 the town was valued at 1000 considerably more than the 500 it was assessed at in 1000 indicating that one or more significant changes had occurred in the town in the preceding two decades.

3.2.3 Almost immediately following the Norman invasion Arundel was granted to Roger of Montgomery and

the construction of a castle commenced. A castle is recorded in Arundel in 1001 and this formed part of the immediate phase of castle building implemented by the new Norman regime. The construction consisted of a motte with two baileys on a site to the north of the town and River Aron.

By the time of the construction of the Castle Arundel had already become a flourishing market town and in 1080 an annual fair was established. Arundel Castle after the invasion became the administrative centre of the Rape of Arundel (a division of the county of Sussex which has Anglo-Saxon origins) as well as its foremost fortification. Soon passing into the hands of the monarch the Castle was briefly occupied by William de Albini in the mid 11th century reverting to the Crown in 1100 following which additions including a chapel were added before it reverted back again to de Albini's heirs.

The prosperity of the town and its place in the economy of the area was attractive to others resulting in the continued expansion of the town. A Dominican Friary was established in 1090 a bridge across the Aron had been built by 1000 the success of the port encouraged merchants and traders from abroad and the town expanded appearing to have suburbs south of the river by the early 10th century. The economic and social success of the town was partly affected by two fires in 1008 and 1000 which destroyed some of the town and these may have exacerbated the decline of the town through the later medieval period the decline of English towns from the mid 10th century onwards being a relatively common theme.

In 1000 FitzAlan family inherited the earldom of Arundel through marriage and in 1000 the Earldom of Arundel and the Castle transferred to the 4th Duke of Norfolk upon his marriage.

During the English Civil War in the mid 17th Century the Castle changed hands three times as a result of which it was severely damaged and left a partial ruin. The Dukes of Norfolk no longer occupied the Castle with any frequency and it was not until the accession of the 11th Duke in the 1080s that the Castle once again became habitable. During his tenure the north-east, south-east and south-west ranges were rebuilt in a hybrid of Norman and Perpendicular styles however by his death in 1810 the building work was not complete. It is said that visitors were not impressed by the building when Victoria determined it as 'bad architecture'.

A sketch of Arundel from the east on display in the Castle undated figure illustrates the view of the Castle and town prior to the changes made at the end of the 18th Century at a time when the town was

described variously as poor and decayed—the fortunes of the town seemingly echoing the fortunes of the Castle.



Figure 2: Sketch of Arundel Castle and town, undated.

- 2.9 As a result of the somewhat disdainful opinion of the rebuilding works of the 11th Duke in the late 18th century—the 1st Duke—upon his inheritance of the Castle and title—undertook a further round of reconstruction in conjunction with architect Charles Alban Bickler. Restoring the Norman parts of the complex—he also introduced electric lighting and a new water supply by the end of the 19th century. The new ranges at the south of the complex were inspired by the Gothic English and French medieval architecture.
- 2.10 The population of Arundel stagnated during the Victorian and Edwardian periods—and the historic core of the town remained contained within its earlier area.
- 2.11 The Ordnance Survey map of 1890 (Figure 3) illustrates the footprint and layout of the newly constructed structures—notably at the south bailey—in contrast to the medieval structures which remained. The map also illustrates the town located to the north of the River Aron—set in a landscape of regular field patterns to the south and east—which comprised the low lying land and river valley—over which the Castle had so long looked and dominated. The recently constructed Roman Catholic Church of St Philip Neri—echoing the French Gothic form of the Castle which followed it—is shown. Designed by Joseph Hansom—the

church alongside the Castle dominated the skyline of Arundel when seen from the south and east in the wider landscape locally taking advantage of the higher ground at the north of the town.



Figure 3: Extract of Ordnance Survey map, 1897 © National Library of Scotland

1.1 The Ordnance Survey map of 1911 (Figure 3) illustrates the town which was still largely contained to the north and west of the River Arun. However, development along Ford Road (set slightly south of the town) is evident. The contour lines detailing the elevation of the town and surrounding area are useful in illustrating the elevation of the town and its components and the wider landscape which indicates the presence that the Castle and grounds has in relation to its surrounding built and natural context.



Figure 4: Extract of Ordnance Survey map, 1914 © National Library of Scotland

- 1□ During the Second World War the Castle once again took on a defensive role for the town and wider area being occupied by British, American and Commonwealth troops. Its strategic location along the south coast adjacent to the River Arun and upon high ground above the low lying town and lower lying valley afforded it significance should any potential invasion have occurred.
- 1□ Following the Second World War the Castle reopened to visitors the 1st Duke of Norfolk moved the family to a private residence in the park which had developed in the north bailey. Outside the Castle the town grew further beyond the central core of the historic town with the expansion of Ford to the south. Historic mapping suggests that Ford developed as a separate settlement largely due to the low ground between it and the old town (this area had been recorded as containing land called ‘Boggy Meads’ and ‘The Waterwood’ in 18th Century mapping). In the 19⁰⁰s this gap was seen as convenient for the location of a new road which would link routes from the east and west through and to the town. Figure 5 illustrates the route of the new road system through the town which effectively split the historic core of the town from the development at Ford.

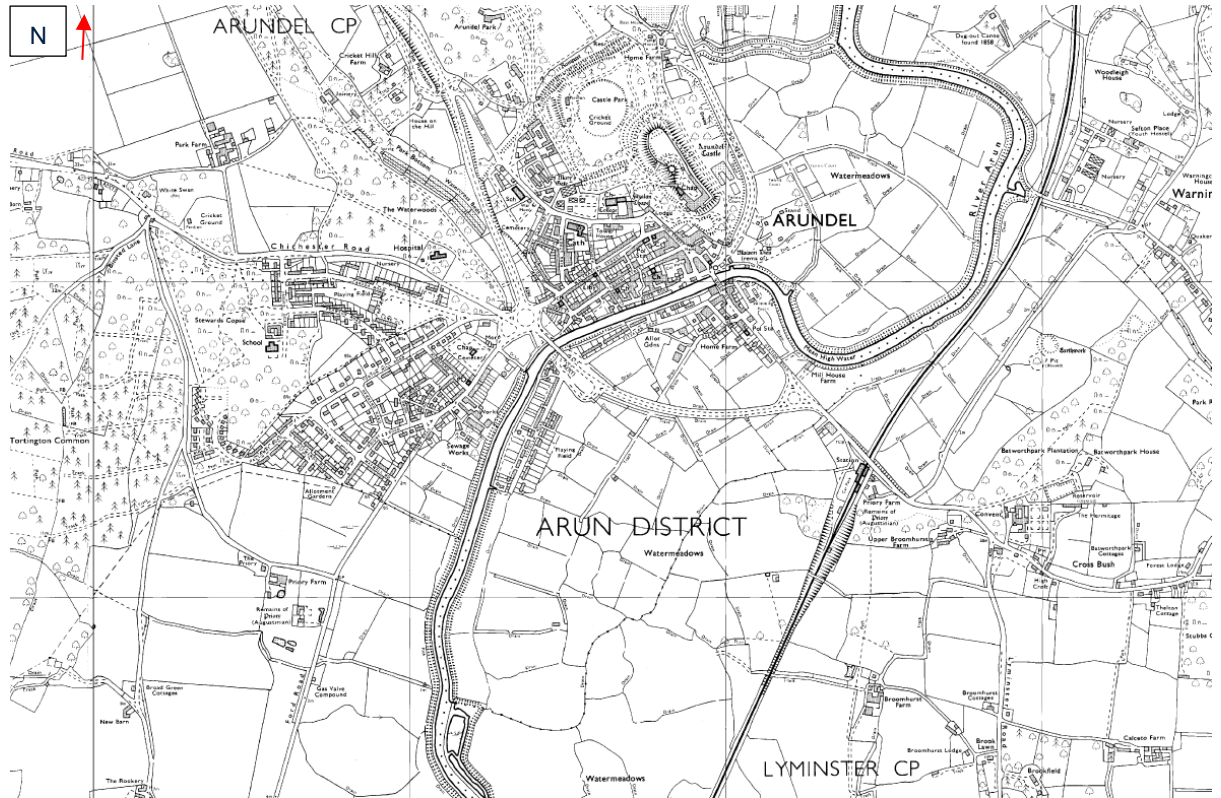


Figure 5: Extract of Ordnance Survey map, 1976-1992 © old-maps.co.uk

4.0 Heritage Assets – Significance and Setting

4.1 Introduction

- 4.1.1 A heritage asset may be defined as a building, monument, site, place, area or landscape positively identified as having a degree of significance meriting consideration in planning decisions because of its heritage interest. Heritage assets include designated heritage assets and assets identified by the local planning authority (including local listing).
- 4.1.2 The planning policies listed in Appendix 1 aim to promote development proposals that will preserve, conserve and where possible and appropriate enhance the historic environment and that will seek to avoid or mitigate against harm.

4.2 Significance

- 4.2.1 Historic England suggest that the aspects that reflect significance are the four values that people associate to a place: aesthetic value, evidential value, historic value and communal value. However, the NPPF defines the significance of a heritage asset as “*The value of a heritage asset to this and future generations because of its heritage interest. That interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset’s physical presence, but also from its setting.*” The NPPF definition largely corroborates the four values identified by Historic England in the *English Heritage Conservation Principles Policies and Guidance 2008*, although the Historic England Guidance takes a broader approach.
- 4.2.2 Figure 1 indicates the designated heritage assets in Arundel and the surrounding area which may be sensitive to the proposed scheme options. This report focuses on the Grade I Listed Arundel Castle including any associated designated and non-designated heritage assets within the curtilage of the Castle including the Scheduled Monument.

4.3 Arundel Castle

- 4.3.1 Arundel Castle is a Grade I Listed building designated in 1909. It comprises a primarily late 19th century structure of Gothic Revival architecture with remains of the medieval keep, gatehouse, barbican and curtain wall. The Norman motte and shell keep remains at the centre with two outer baileys one to the

north comprising the gardens and one to the south containing the residential accommodation as it could have been done originally.

1.1.1 The significance of Arundel Castle as a heritage asset is derived primarily from its architectural or aesthetic, historical and evidential or archaeological values. The setting of the Castle, the views to and from it and the place it holds in and beyond the town today also make a great contribution to its heritage significance.

1.1.2 At first glance, Arundel Castle appears to be a classic 'medieval' castle with defensive towers, castellated turrets and an elevated shell keep from which power was held and defence centred. That is until greater study of the residential part of the Castle is made. The Castle and grounds have been subject to addition, alteration and demolition since its establishment and most of the main structure that is to the southern bailey is actually 19th century in origin. The Gothic Revival style of the building designed by Charles Alban Buckler under the patronage of the 1st Duke of Norfolk is far removed from the original defensive requirements of the Castle. Pevsner assesses that this has resulted in 'imitation castle' and that this renders Arundel Castle as a 'great disappointment'. It is clear that the changes made in the 18th and 19th centuries have removed much of the earlier fabric and resulted in the erosion of a truly 'medieval' concept of a castle in its truest sense. This does not mean that the complex of structures which range from the earliest Norman period to the early 19th century does not still possess a very high degree of architectural interest. It is still legible as an expression of power, dominance and authority as it always has been and the mix of Norman fabric and 19th century stone ranges do not detract from this. The interior of the Castle, notably the Chapel and Barons Hall and the dining room (former chapel) continues the sense of awe and the architectural detailing within these rooms is of particular note.

1.1.3 The town of Arundel predates the presence and establishment of the Castle, however the development and character of the town is intertwined with the Castle and the relationship it has with the Castle. From its initial establishment, the Castle became the administrative centre of the area and continues to play a large part in the town today. The deep rooted relationship with the town remains evidenced today in ways as indirect as businesses including the Norfolk Arms public house and the Motte and Bailey cafe in the High Street. The associations the Castle has had with royalty and the ruling elite since the medieval period also contribute to the development and narrative of the Castle complex and the wider town.

- 1.1.1 The topography of the town of Arundel and specifically the location of the Castle on the high ground adjacent to the River Aron has meant that occupation and activity within the vicinity of the Castle predates the Castle itself. The extant medieval fabric and structures are only part of what would have been a wider complex of structures and it is known that further structures of later dates also existed and have since been altered or lost whether it be through planned works or following its use as a defensive structure in the English Civil War. The potential for below ground features within the Castle complex is high and in assessing any such remains in addition to analysing the extant built fabric provides a high degree of potential to further understand the use, occupation, development and phasing of not only the Castle and its grounds but of earlier periods too with artefacts and features beyond the wealth of documentary evidence which exists.
- 1.1.2 Arundel does not only hold a place of importance in the local context. As one of the earliest Norman castles established in England it holds significance in the wider history of the country as evidenced the Castle was one of the first structures to be added to the National Heritage List for England in the late 1900s. It has been captured in numerous works of art and in the public imagination as evidenced by the large numbers of visitors from across the globe annually. It continues to dominate the town and wider area geographically and culturally.
- 1.1.3 The topography of the town and the high ground upon which the Castle is located affords the Castle its imposing presence not only over the town but across the wider landscape notably to the east and south over the low lying land and River valley. Designed within the context of the very early Norman occupation and to establish the presence of the new barons and landowners over the local area the Castle retains this dominating character today and the impression it makes upon the approach towards Arundel especially from the east, is one of Sussex's most iconic images. Pevsner describes Arundel as possessing one of the 'great town views of England', and Arundel Castle and its relationship with the town and surrounding landscape justifies this. The understanding of and ability to appreciate Arundel Castle is arguably best done from afar when the impact of the complex is first encountered and from which the Norman elite intended to make their statement of authority. The wide low lying and open aspect of the landscape along the River Aron and wider Aron valley from the south and east towards Arundel remains today and provides the best views not only towards the town and Castle but also out from the Castle towards the coast. The relationship the Castle has with the landscape in which it is

located at ways of importance when it was established in order to illustrate the power and control held by the new Norman elite remains.



Figure 6: View towards the south-east from the Bakehouse tower roof (south –east tower of the Castle)

- 1.8 The setting of Arundel Castle and the setting in which it is located is of high importance in contributing to the aesthetic interest of the structure and in understanding the significance of the Castle.



Figure 7: View northwards along the River Arun towards Arundel Castle

4.4 Arundel Conservation Area

4.4.1 Arundel Conservation Area was designated in 1988 and extends to incorporate most of the form of the town as it existed at the end of the 19th century. Until the 20th Century the town had experienced little expansion to the south/east of the River Arun or south-west of the water meadows to the western end of Maltravers Street. In part this was due to the decline in economic prosperity of the town in the 18th and 19th centuries. The Conservation Areas Supplementary Planning Guidance adopted in 2006 includes an assessment of the character and appearance of the Arundel Conservation Area. The relatively compact and concentrated town core comprises buildings of a variety of architectural form and style however the town possesses a sense of conformity of scale interspersed by public or ecclesiastical buildings which by their nature stand out in the wider built form. These include the Grade I Listed Roman Catholic Cathedral of St Philip Neri and the Grade II Listed Town Hall (NHLE number 1000901). Arundel Castle and its associated structures and features dominate the north-eastern section of the Conservation Area.

1.1.1 The existing A11 passes south-west of the Arundel Conservation Area and whilst it does not make a direct contribution to the character and appearance of the Conservation Area it does contribute to its setting. The constant vehicular activity and associated noise emitted results in an ever present background feature to the south-western section of the Conservation Area in particular. As such when experiencing the Conservation Area and its component assets including the designated heritage assets along the western ends of Maltravers Street and Tarrant Street and surrounding routes the A11 makes a negative contribution to the relatively slower paced activity of the Conservation Area.

5.0 Proposals and assessment of impact

5.1 Introduction

- 5.1.1 The management and mitigation of change to the heritage resource resulting from development is based on the recognition within Government planning objectives that ‘...*heritage assets are an irreplaceable resource...*’ (NPPF para. 18). Impacts to the historic environment and its associated heritage assets arise where changes are made to their physical environment by means of the loss and/or degradation of their physical fabric or setting which in turn leads to a reduction in the significance of the historic environment record and its associated heritage assets.
- 5.1.2 Planning legislation and policy requires that development should seek to preserve or enhance the significance of a heritage asset. Heritage policy in both its national and local contexts are detailed in Appendix 1.

5.2 Proposed options

- 5.2.1 The Consultation exercise comprises six scheme options of which are outlined and explained in the Highways England A11 Arundel Bypass Further Public Consultation document and associated reports. All six options involve the creation of a dual two-way carriage way from the existing A11 to the east of Arundel and the existing A11 to the west of Arundel. From east to west all six options commence at the existing Crossbush junction of the A11 and A8 junction leaving the existing A11 at this point. Proposed options 100 (Cyan route) and 109 (Beige route) pass above the Arun Valley railway line south of Arundel Station travelling north-west towards Arundel to cross the River Arun immediately south of the existing A11. At this point the Highways England fly through viaducts which form part of the consultation exercise indicate that the proposed dual two-way carriage way for both of these options will be formed by a flyover above the existing road system and then following the course of the existing A11. The two routes follow a largely similar course the main difference between them being that the 100 Cyan route does not tie in with the existing road network through the town and the 109 Beige route will connect at a junction with Ford Road to create a ‘through about’ comprising up to six lanes of east-west traffic and an integrated roundabout and network of junctions. Due to the similarities of these two options in terms of impacts on Arundel Castle and Arundel Conservation Area they are assessed

together.

Four proposed scheme options pass south of Arundel to create a true 'bypass' from east to west and vice versa. From east to west all four routes commence at Crossbush Junction and pass further south of Arundel Station than the Cyan and Beige options to cross the Arundel Valley railway line and continue west crossing the River Arun c. 1.5 km south of the medieval section of the town. All four options pass south of the Grade II Listed Tortington Priory Barn and the Tortington Augustinian Priory Scheduled Monument. Option 1 (Crimson route) passes slightly closer to the designated heritage assets at Tortington Priory to cross above Ford Road and travel north-west through the ancient woodland west of Arundel within the South Downs National Park to rejoin the existing A27 at Haverwood Park. The three further options (Option 4/5 Amber, Option 4/5 Magenta and Option 3/1 Grey) continue west from Ford Lane to pass below Tortington Lane to rejoin the existing A27 north of Walberton c. 1 km west of Arundel.

Figure 8 taken from the Arundel Bypass Further Consultation document August 2019 illustrates the proposed options and routes in relation to the existing landscape, rail and vehicular routes.

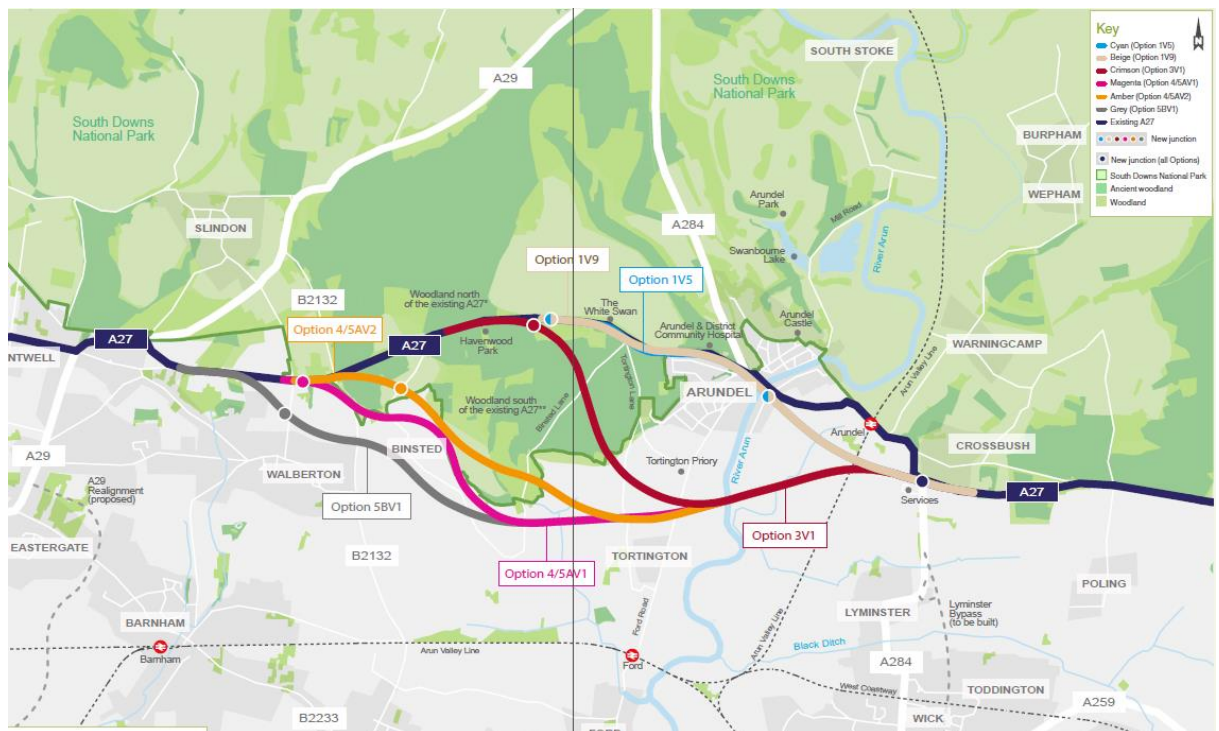


Figure 8: Proposed scheme options routes forming part of the Further Public Consultation exercise

5.3 Arundel Castle

- 5.3.1 The landscape to the south and east of Arundel Castle and the town forms a large part of the setting of the Castle which contributes to its significance. The position of the early Norman Castle was chosen for its strategic location on high ground overlooking the town and landscape in order to oversee the area, provide a measure of defence and equally to dominate and be seen from the surrounding ground. Its purpose expressed in its buildings and architecture was designed to impress and impact upon the local population. Today the undeveloped low ground of the river valley immediately south and east of the town enables a sense of this original purpose to be appreciated and equally shows off the late 19th century complex in the wider landscape continuing the medieval intent and expression of physical and social control.
- 5.3.2 The views into and out from the Castle are important in the history and narrative of the Castle and the town which the castle dominates. The introduction of the A11 route between the historic town and the development at Ford has resulted in a barrier through the town since the second half of the 20th century. The views from the low lying land towards the Castle and from the Norman keep of the Castle for example south and eastwards do comprise the A11 and there is a degree of visual intrusion which the current road makes (Figure 9) however this is relatively subtle through glimpsed views of vehicular movement south-east of the historic town.



Figure 9: View southwards from the Keep, over the historic town towards the River Arun

11.11 The proposed scheme options which pass close to the present Arundel route (Options 100 Cyan and 109 Beige) will comprise a section of elevated flyover across the river valley and westwards towards Ford Road. By being elevated and comprising a two lane dual carriageway, the effect of these proposals will be to emphasise the road and result in a greater visual intrusion across the landscape and in relation to views from and towards the Castle. Figure 10 indicates the view towards Arundel Castle from the immediate west of the River Arun; the current Arundel can be seen crossing the river; the buildings at Fitzalan Road are seen on the east side of the river. Figure 11 is a snapshot of a visual simulation of the proposed Beige route which at this point the Cyan route will echo illustrating the proposed dual carriageway. Across the low ground, the road will be either elevated by way of an embankment or piers to support the road. The height of the proposed road which appears to be similar than the roof height of a two storey house, and its increased bulk in addition to its relative proximity to the town, will result in a much increased visual presence and intrusion upon the setting of Arundel Castle and a moderate adverse impact upon the setting and significance of the Castle.



Figure 10: View northwards towards Arundel Castle from the valley of the River Arun. The Norman Keep can be seen on the skyline in the centre of the image, with the 19th century ranges to the east (right)



Figure 11: Video simulation view of the Cyan and Beige option routes west of the Arun Valley railway line, south-east of Arundel, towards the north-west

The other four proposed scheme options will be set further south of the town and more distant from the

historic town and Arundel Castle. As such they will result in a reduced impact and lesser intrusion upon the setting of the Castle and upon the understanding of the landscape and the ability to appreciate the setting of the Castle to the south and east.

5.4 Arundel Conservation Area

5.4.1 As has already been assessed, the present A11 which passes through Arundel to the immediate east of the River Aron and between the historic town and development at Ford makes a negative contribution to the setting of the Arundel Conservation Area. This is by virtue of its proximity to the south west portion of the Conservation Area. The proposed scheme options (Cyan and Beige) would result in the creation of an elevated two lane dual carriage way to the immediate south of the existing A11 route at this point. The result would whilst located slightly further from the Conservation Area be one of increased activity understood to comprise increased traffic speeds and potentially additional traffic and increased noise pollution which would be enhanced by the elevated nature of the route. The presence of the proposed bypass would also be increased primarily at a localised level to the south west of the asset further affecting the character and significance of the Arundel Conservation Area by way of a direct adverse impact on its setting.

5.5 Summary

5.5.1 The A11 Arundel Bypass Further public consultation document summarises the results of the A11 Arundel Bypass Environmental Assessment Report (Chapter 4 – Cultural Heritage) identifying that the two scheme options which pass through the town (Cyan and Beige options) will during the construction phase result in a moderate adverse effect on all the heritage assets (except the Lyminster Conservation Area) identified as part of the baseline conditions in the Highways England Environmental Assessment Report Chapter document (August 2019).

5.5.2 It is deemed that there will be an effect of moderate adverse impact on the significance of Arundel Castle and the Arundel Conservation Area during the construction phase and a minor or slight adverse impact on the significance of the Arundel Conservation Area in its operational phase which will be most harmful at the south west section of the Conservation Area.

5.5.3 This Heritage Statement therefore indicates that the ongoing impact of the Cyan and Beige options will continue to have an effect of moderate adverse impact on the setting and significance of Arundel Castle

into the operational phase of the proposed routes. As such, this conclusion does not align with the conclusion of the Environmental Assessment Report summary in the Further public consultation document which concludes that the Cyan and Beige schemes will result in only a slight adverse effect on all heritage assets which includes Arundel Castle.

6.0 Conclusion

- 6.0.1 Savills Heritage Planning have been commissioned to provide an assessment of the significance of the Grade I Listed Arundel Castle in relation to Highways England's proposed scheme options as set out in their Arundel Bypass Further public consultation document (August 2019) and the potential impact that proposed routes may have upon the setting and significance of the Castle. The report has focused upon the two routes which are proposed to pass through the centre of the town in close proximity to the existing A101 route through Arundel (Options 100 Cyan and 109 Beige). It also recognises the significance of the Arundel Conservation Area and the potential impact of the Cyan and Beige routes upon its significance.
- 6.0.2 Arundel comprises approximately 100 Listed Buildings and the Arundel Conservation Area which may also be sensitive to the proposed routes. However one of the key sensitive receptors to the proposed routes is Arundel Castle and notably its setting and views towards the Castle from the south and east and views from the Castle over the River Aron and its low lying valley.
- 6.0.3 The Castle has origins in the immediate post-Norman invasion period and possess medieval fabric including the Keep as well as having experienced much later alteration, loss and addition including the late 19th century south and east ranges which along with the Norman structures dominate the town and wider area. The topography of the Castle especially contributes to its character and presence in the town, and the Castle's setting contributes to its significance.
- 6.0.4 The existing A101 route east of the Aron valley railway line and Arundel Station is deemed to contribute to the setting of the Castle as it is noticeable in views between the Castle and land south and east of the town having been constructed in the 1900s. The existing A101 also contributes to the setting of the Arundel Conservation Area particularly the character of the south west section.
- 6.0.5 Following an assessment of the history and development of Arundel Castle and Arundel town and assessment of the contributions made to the significance of the Castle it is considered that the two proposed routes as set out in the Consultation documents that will pass through Arundel (Cyan and Beige options) due to the proximity, scale, height and visual intrusion will result in an increased adverse impact upon the significance of Arundel Castle and this is deemed to be of a moderate nature both at

construction and operational stages. It is deemed that the proposed Cyan and Beige routes would also have a moderate adverse impact upon the character and significance of the Arundel Conservation Area during the construction phase followed by a minor adverse impact in its operational phase. These impacts would be contrary to policies of the NPPF and local planning policy and national legislation in terms of impact of the proposals upon the heritage asset of Arundel Castle.

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Appendix 1: Summary of factors for determining the importance of known and potential heritage assets

Value	Importance	Factors determining the relative importance
Evidential	High	There is a high potential for the heritage assets to provide evidence about past human activity and to contribute to our understanding of the past. This potential relates to archaeological sites that are likely to survive both below and above ground and in the absence of written records provide the only source of evidence about the past resulting in enhanced understanding of the development of the area. It also relates to other physical remains of past human activity such as historic fabric within buildings and surviving elements in the historic landscape which contribute to its historic character.
	Medium	The potential for heritage assets to yield physical evidence contributing to the understanding of the development of the area is recognised but there may be fewer opportunities for new insights to be deduced due to the nature of the heritage assets in question or knowledge of the past of the area or subsequent changes to the development of the area throughout history. The potential for archaeological deposits to contribute to an understanding of the development of area may not be fully recognised due to the current level of understanding of the local and regional history. The potential may also be impacted in a limited way by later development.
	Low	The physical remains are preserved in a limited way – limited assets survive very few are recorded or assets are known to have been partially or significantly damaged. Low evidential value of archaeological deposits may be affected by the current lack of research within the area but this does not preclude for further remains of higher value to be discovered.
	None	There are no surviving physical remains from which evidence about past human activity could be derived assets are known to have been removed or destroyed by later activity
Historical	High	The legible heritage assets are clearly perceptible in the landscape/topscape and the links between the assets and the history or prehistory of the area illustrated value or to historical events or figures associated with the area associative value are easily visible and understandable. The high value is not precluded by some degree of the 19th/20th century alterations to the historic buildings and landscapes.
	Medium	The legible heritage assets are present in the area but their legibility may have been compromised by some form of alteration to the asset or its surroundings (e.g. rural parish church now situated within a suburban residential development). Even in their present form such assets enable the local community to visualise the development of the area over time as there are potential associations between assets. The presence of these assets may contribute to an understanding of the development of the area. Further research including archaeological investigations may clarify these associations and elucidate the contribution of these assets to the history of the wider area.
	Low	The historical associations of the asset are not clearly understood as a result of severe changes to the asset or its surroundings
	None	There are no legible heritage assets and their associations are not understood.



Value	Importance	Factors determining the relative importance
Aesthetic	High	The aesthetic values of the heritage assets are visually perceptible within sympathetic surroundings developed through conscious design or fortitously through prehistory and history. The completeness or integrity of the heritage assets within the landscape is clear and their contribution to the aesthetics of the surrounding area is significant.
	Medium	The aesthetic qualities of the individual assets or landscapes are legible but there may have been considerably impacted upon by the modern unsympathetic development.
	Low	The aesthetic qualities of the individual assets or landscapes have been significantly impacted upon by the modern development as a result of which the aesthetic value is not clear though there may be a possibility for improvement.
	None	Assets have no aesthetic values as they have been removed by inconsiderate modern development. Buried archaeological remains are not ascribed aesthetic values as whilst buried they are not visible/perceptible in their context.
Communal	High	Heritage assets which provide a sense of togetherness for those who experience it. Assets that hold the ability for people to feel a sense of collective experience or memory and in which a collective identity can be understood. They may provide a feeling of reference, remembrance or commemoration. The asset represents something which may be larger than the asset itself and may represent an event or being despite any loss of fabric or character of the asset.
	Medium	The sense of a collective identity or collective commemoration may be limited by the lack of understanding of the event or asset. The process of time has lessened the meaning of the event or asset for the community or that meaning may be limited to specific groups or at a regional or local level.
	Low	The ability of the asset to create or reinforce a sense of togetherness for a community may be limited by later development which has encroached upon the asset or its setting. The ability of the asset to elicit a shared reaction or understanding has been severely impacted by the loss of or major change to the setting of the asset.
	None	Heritage assets that do not bring people together by providing a shared experience, memory or place of commemoration.

Appendix 2: Criteria to determine the level of impact

Level of impact	Archaeological Remains	Historic Buildings	Historic Landscapes
Major	<p>Changes to most or all key archaeological materials such that the resource is totally altered.</p> <p>Comprehensive changes to setting and consequential impact on setting.</p>	<p>Change to key historic building elements such that the resource is totally altered.</p> <p>Comprehensive changes to setting and consequential impact on significance.</p>	<p>Change to most or all key historic landscape elements parcels or components extreme visual effects gross change of noise or change to sound quality fundamental changes to use or access resulting in total change to historic landscape character unit.</p>
Moderate	<p>Changes to many key archaeological materials such that the resource is clearly modified.</p> <p>Considerable changes to setting that affect the character of the asset and impact some aspects of the assets significance.</p>	<p>Changes to many key historic building elements such that the resource is significantly modified.</p> <p>Changes to the setting that affect the character of the asset and impact some aspects of the assets significance.</p>	<p>Change to many key historic landscape elements parcels or components visual change to many key aspects of the historic landscape noticeable differences in noise or sound quality considerable changes to use or access resulting in moderate changes to historic landscape character.</p>
Minor/Slight	<p>Changes to key archaeological materials such that the resource is slightly altered but remains understandable.</p> <p>Slight changes to setting that are tangible but without impact on significance.</p>	<p>Change to key historic building elements such that the asset is slightly different but remains appreciable.</p> <p>Change to setting of an historic building such that it is noticeably changed but without impact on significance.</p>	<p>Change to few key historic landscape elements parcels or components slight visual changes to few key aspects of historic landscape limited changes to noise levels or sound quality slight changes to use or access resulting in limited change to historic landscape character.</p>
Negligible	<p>Very minor changes to key archaeological materials or setting without consequential effect on significance.</p>	<p>Slight changes to historic building elements or setting without consequential effect on significance.</p>	<p>Very minor changes to key historic landscape elements parcels or components virtually unchanged visual effects very slight changes in noise levels or sound quality very slight changes to use or access resulting in a very small change to historic landscape character.</p>
No change	No change	No change to fabric or setting	No change to elements parcels or components no visual or audible changes no changes in amenity or community factors.

Appendix 3: Legislation and planning policy

Legislation

Legislation relating to listed buildings and conservation areas is contained within the Planning (Listed Buildings and Conservation Areas) Act 1990.

The Planning (*Listed Buildings and Conservation Areas*) Act 1990 provides that with regard to applications for planning permission affecting listed buildings or Conservation Areas or their setting:

“s.66(1) In considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority or, as the case may be, the Secretary of State shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses.”

“s.72 In considering development which affects a Conservation Area or its setting, the LPA shall pay special attention to the desirability of preserving or enhancing the character or appearance of the Conservation Area.”

National Planning Policy Framework

National planning policies on the conservation and enhancement of the historic environment are set out in the National Planning Policy Framework (NPPF) which was first published by the Department for Communities and Local Government (DCLG) in March 2012 with a second edition issued in July 2018 and further revisions in February 2019.

The policies set out in NPPF also apply to the consideration of the historic environment in relation to other heritage-related consent regimes for which planning authorities are responsible under the Planning (Listed Buildings and Conservation Areas) Act 1990.

Section 16, ‘Conserving and Enhancing the Historic Environment’ specifically deals with historic environment policy which is broadly unchanged since 2012 although there has been some reordering and the addition of subheadings (paragraphs 18-22).

When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset’s conservation, ‘irrespective of whether any potential harm amounts to

substantial harm, total loss or less than substantial harm to its significance' (para 193).

Any harm to or loss of the significance of a designated heritage asset from its alteration or destruction or from development within its setting should require clear and convincing justification (para 190)

Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset this harm should be weighed against the public benefits of the proposal including where appropriate securing its optimum viable use (para 190)

The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application. In weighing applications that directly or indirectly affect non-designated heritage assets a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset (para 190)

Local planning authorities should not permit the loss of the whole or part of a heritage asset without taking all reasonable steps to ensure the new development will proceed after the loss has occurred (para 198)

Local planning authorities should look for opportunities for new development within Conservation Areas and World Heritage Sites and within the setting of heritage assets to enhance or better reveal their significance. Proposals that preserve those elements of the setting that make a positive contribution to the asset or which better reveal its significance should be treated favourably (para 199)

In para 192 it states that 'In determining applications, local planning authorities should take account of:

- the desirability of sustaining and enhancing the significance of heritage assets and putting them to viable uses consistent with their conservation
- the positive contribution that conservation of heritage assets can make to sustainable communities including their economic vitality and
- the desirability of new development making a positive contribution to local character and distinctiveness.

A heritage asset may be defined as a building, monument, site, place, area or landscape positively identified as having a degree of significance meriting consideration in planning decisions heritage assets may also be considered to be valued components of the historic environment. The NPPF recognises that heritage assets are a non-renewable resource and that heritage conservation has wider benefits while accepting that the level of

conservation should be commensurate with the significance of the assets concerned.

Local Planning Policy

Section 88 of the Planning and Compulsory Purchase Act 2004 states that planning applications must be determined in accordance with the development plan for an area except where material considerations indicate otherwise.

Arundel is located within the area of Arun District Council and in part the South Downs National Park Authority area. Arun District Council adopted the Arun Local Plan 2011 – 2031 in July 2018. South Downs National Park Authority adopted the South Downs Local Plan in July 2019. The following policies included in each Local Plan are relevant in the case of the proposed scheme options for the A11 Arundel Bypass. Only sections of the policies most relevant to the specific proposed scheme options are referenced.

Arun Local Plan

Policy HER SP1 - The historic environment: The Local Planning Authority will grant planning permission or relevant consent for development proposals that conserve or enhance the historic environment of the District based on the following approach: Designated heritage assets including listed buildings, structures and their settings and Conservation Areas will be given the highest level of protection and should be conserved and enhanced in a manner appropriate to their significance. Non-designated heritage assets including locally listed heritage assets (Buildings or Structures of Character and Areas of Character) and their settings will also need to be conserved and enhanced in a manner appropriate to their significance and contribution to the historic environment. Development likely to prejudice any of the above including their settings will be refused.

Policy HER DM1 - Listed Buildings Proposals affecting statutory Listed Buildings will be required to: a. Preserve or enhance the historic character, qualities and special interest of the buildings; b. Be necessary and not detrimental to the architectural and historical integrity and detailing of a Listed Building's exterior; c. Protect the architectural and historical integrity and detailing of a Listed Building's interior; d. Protect the special interest of buildings of architectural or historic interest; and e. Protect and where possible enhance the setting of the building.

Policy HER DM2 - Locally Listed Buildings or Structures of Character The Local Planning Authority will continue to identify and compile a list of locally important buildings and structures which make a positive contribution to local distinctiveness. There may be circumstances where the public benefit from the proposed

development or it outweighs any proposed harm in such circumstances the proposal will need to be justified as appropriate. Proposals for the alteration or extension of buildings on the Local List will be expected to relate sensitively to the building or structure and its setting and respect its architectural landscape or historic interest. The Local Planning Authority will seek to preserve features of such buildings which contribute to that interest.

Policy HER DM3 - Conservation Areas In order to preserve or enhance the character or appearance of the Conservation Area planning permission or relevant consent will normally be granted for proposals within or affecting the setting of a Conservation Area provided that a. New buildings and structures acknowledge the character of their special environment in their layout form scale detailing use of materials enclosure and the spaces created between buildings. It does not harm important views into or within the Conservation Area.

Policy HER DM6 - Sites of Archaeological Interest

South Down Local Plan 2

Strategic Policy SD1 Historic Environment

Development Management Policy SD1 Listed Buildings

Development Management Policy SD1 Conservation Areas

Development Management Policy SD1 Archaeology

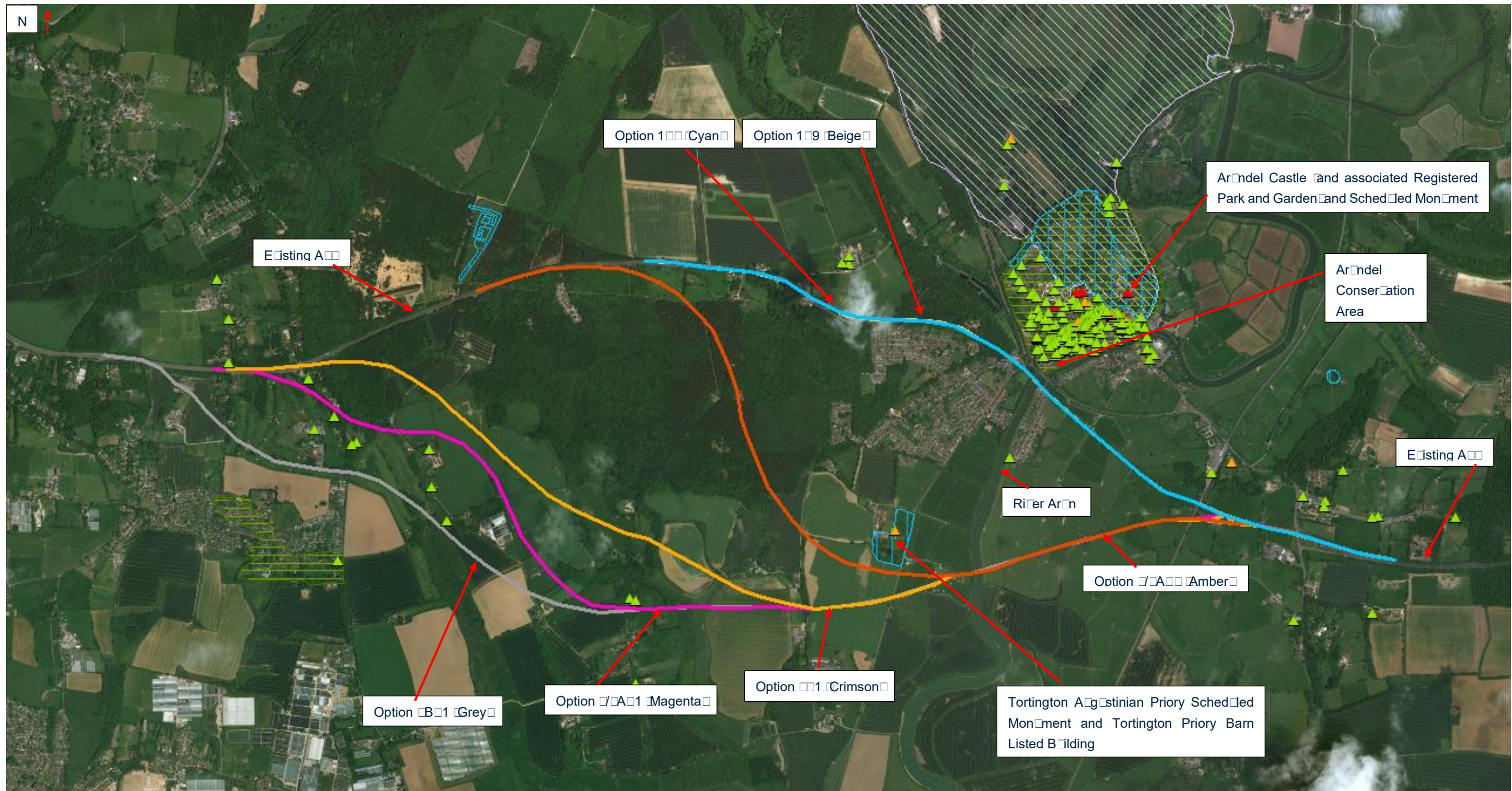


Figure 12: Designated heritage assets (West Sussex HER) within the vicinity of Arundel and the proposed scheme options. Only those discussed in the report are referenced (Red triangles: Grade I Listed buildings, Orange triangles: Grade II* Listed buildings, Green triangles: Grade II Listed buildings)



Savills UK Ltd

Wessex House, Prior's Walk, East Borough, Wimborne, BH21 1PB

t 01202 888000 f 01202 888001 e wimborne@savills.com

www.savills.co.uk



Air Quality Review: A27 Arundel Bypass – Review of Air Quality Assessment

October 2019



Experts in air quality
management & assessment

Document Control

Client	GTA Civils and Transport	Principal Contact	██████████
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Job Number	J3930
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Report Prepared By:	██████████
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Document Status and Review Schedule

Report No.	Date	Status	Reviewed by
J3930	14 October 2019	Final Report	██████████ (Technical Director)

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Air Quality Consultants Ltd
23 Coldharbour Road, Bristol BS6 7JT Tel: 0117 974 1086
12 Airedale Road, London SW12 8SF Tel: 0208 673 4313
aqc@aqconsultants.co.uk

Registered Office: 12 St Oswalds Road, Bristol, BS6 7HT
 Companies House Registration No: 2814570

1 Introduction

- 1.1 Air Quality Consultants Ltd (AQC) has reviewed Chapter 5 - Air Quality of the A27 Arundel Bypass Environmental Assessment Report (“EAR”) and the EAR Erratum for the Project Control Framework (PCF) Stage 2 (Option Selection) of the A27 Arundel Bypass Scheme (“the Scheme”).
- 1.2 The Scheme could consist of one of 6 Scheme Options. The Scheme options are:
- Option 1V5 (Cyan);
 - Option 1V9 (Beige);
 - Option 3V1 (Crimson);
 - Option 4/5AV1 (Magenta);
 - Option 4/5AV2 (Amber); and
 - Option 5BV1 (Grey).
- 1.3 This review focuses on the air quality impacts of the above Scheme options as detailed in the EAR to ensure that the assessment is robust, and that the final route option has been selected based on an appropriate assessment.
- 1.4 This review covers the following issues:
- whether the scope of the EAR Air Quality Assessment submitted by the applicant is sufficient;
 - whether the assessment is based on an appropriate methodology (i.e. is it ‘fit for purpose’); and
 - the identification of any errors or omissions within the assessment.
- 1.5 Where methodological failings are identified, they are described as either a:
- **Minor Issue** – weaknesses have been identified but the professional experience of the reviewers suggests that these are unlikely to affect the conclusions of the assessment;
 - **Moderate Issue** – weaknesses have been identified which may or may not affect the conclusions¹; or
 - **Major Issue** – in the opinion of the reviewers, the failings of the assessment are highly likely to invalidate the reported conclusions.

¹ An issue which is classified as moderate could thus move to being either a major or minor issue depending on specific unknown factors.

2 Review

General Scope

- 2.1 The air quality assessment presented in Chapter 5 of the EAR has been undertaken based on the Design Manual for Roads and Bridge (DMRB) guidance (HA 207/07²) with reference to several Interim Advice Notes (IAN's) that act as interim updates to the DMRB guidance. DMRB guidance is the standard industry approach for the modelling of road infrastructure projects, and the use of the DMRB Guidance for this project is deemed acceptable. However the review of the air quality assessment has identified the following technical issues, as detailed below.

Policy and Guidance

- 2.2 The overall policy and guidance documents considered in the air quality assessment are presented in Table 5.1 of Chapter 5 of the EAR, which are considered correct and acceptable for the assessment of the Scheme options.
- 2.3 Whilst Table 5.1 presents details of the Local Plans published by relevant local authorities, the air quality assessment makes no reference to the local Air Quality Action Plans and the measures contained within these documents to improve local air quality. Given the purpose of the A27 Arundel Bypass is to reduce congestion and improve traffic flow (benefiting local air quality) it is considered unlikely the proposals would contradict measures contained in the Air Quality Action Plans. However, for completeness reference should still be made to the Air Quality Action Plans to ensure the Scheme Options do not restrict any further local air quality measures.

Methodology

- 2.4 The following sections are considered to have methodological failings. As discussed in Section 1, a classification of the failing has been applied.

Construction Assessment *[Moderate Issue]*

- 2.5 The air quality assessment has excluded an assessment of emissions from construction vehicles due to the lack of available data and an assessment of construction traffic emissions has been deferred to PCF Stage 3 (Preliminary Design). However, as shown in Table 2.2 of the EAR, the duration of the construction phase of the Scheme options are expected to range between 45 and 48 months. Given the long time period of the construction phase, and the potential cumulative impact of the construction works occurring with the existing congested road, indicative modelling

² Highways Agency, Air Quality, Design Manual for Roads and Bridges HA207/07, Volume 11, Section 3, Part 1 (May 2007)

should be carried out in order to determine the likely significant effects of each Scheme option. Whilst the impacts maybe short-term the results from this modelling may result in a preferred Scheme to be identified and would ensure significant impacts are avoided.

- 2.6 An assessment of construction dust has been undertaken. This has considered any dust impacts with 200 m from the source of construction activity as it is considered impacts are very unlikely to result in a significant effect beyond this distance. However, the Institute of Air Quality Management Guidance's screening criteria for construction dust³ recommends a distance of 350 m from the boundary of a construction site/ activity to a human receptor could result in significant effects. As such the current assessment, of a 200 m boundary, has the potential to underestimate the likely magnitude of impact. As above, should a buffer of 350 m from the source be used the results may result in a preferred scheme to be identified.

Street Canyon [Minor Issue]

- 2.7 The air quality modelling assessment has considered the impact of the Scheme options on the Air Quality Management (AQMA) in Storrington. The EAR describes the Storrington AQMA as being a street canyon (i.e. a narrow street where nearby buildings prevent the dispersal of pollutants). To take account of the street canyon in the Storrington AQMA, an adjustment factor based on local monitoring has been applied to the modelled results. Consequently no technical details are provided on the characteristics of the Storrington AQMA street canyon and .if the width of the road and height of the buildings remain consistent throughout the street canyon, and therefore if the adjustment factor is appropriate for use for the entirety of the street canyon. Without providing this further detail, there is a risk the use of the adjust factor for the street canyon may not be truly representative.

Terrain [Moderate Issue]

- 2.8 The air quality modelling assessment does not provide sufficient information that the influence of local terrain has been considered. This includes the use of a terrain file in the air quality model and the use of additional calculated vehicle emissions for changes in gradient. In particular, these details should be included to take account the influence of topography at Crossbush and Ford Road Roundabout. Should terrain data and vehicle gradient emissions be used in the air quality modelling this may result in revised modelled results. The use of terrain may also result in a preferred scheme to be identified.

³ Institute of Air Quality Management, Guidance on the assessment of dust from demolition and construction, Version 1.1 (2014)

Ecological Receptors [Major Issue]

- 2.9 The air quality assessment and Chapter 8: Biodiversity of the EAR, does not consider the impact of traffic emissions from the Scheme options on the Chantry Mill Special Site of Scientific Interest (SSSI); the Binsted Wood Complex Local Wildlife Site (LWS) and Rewell Wood Complex LWS all located within 200m of the modelled roads and all sensitive to nitrogen deposition.
- 2.10 In particular, for the Binsted Wood Complex the Crimson route is proposed through this LWS and therefore has the potential to have greater impact to this habitat than the other Scheme options (which are located on the edge of the LWS). For the Rewell Wood Complex the Cyan, Beige and Crimson routes are proposed through this LWS and therefore have the potential to have greater impacts to this habitat than the Magenta, Amber and Grey routes.
- 2.11 Consequently no evidence is presented, in the air quality assessment, on the changes to nitrogen deposition from each of the Scheme options in each of the ecological sites. The application is therefore incomplete as it does not include an assessment of the impacts upon these local ecological sites (including benefits in the Chantry Mill SSSI).

Human Receptors [Major Issue]

- 2.12 As detailed in the air quality assessment, monitored annual mean nitrogen dioxide concentrations on the roadside of the A27 at Ford Road are above the annual mean objective, and show exceedances in the modelled base year (of 2016) at selected receptors.
- 2.13 Consequently IAN 174/13 states “*where the assessment indicates exceedances of an air quality threshold then the assessment should be expanded to include all receptors that are at a reasonable risk of exceeding that air quality thresholds*”. Whilst the monitoring results and base year modelling results show exceedances for nitrogen dioxide at the Ford Road roundabout, the modelling assessment is based on selected individual receptors at worst-case (i.e. those closest to affected road links) locations. By selecting only individual receptors, this approach has the potential to under predict the likely impacts of the Scheme options. By including more receptors there would be further data on the number of receptors to either worsen or improve with each of the Scheme options and what the total magnitude of this change would be. This is of particular relevance for the Cyan and Beige routes, which go through the Ford Road roundabout. The results from the extra receptors considered may alter the conclusions and may result in a preferred scheme to be identified.

TAG Appraisal [Major Issue]

- 2.14 As described in the DMRB Guidance, at each reporting stage a TAG appraisal for local air quality should be undertaken. A TAG assessment has not been presented in the air quality assessment and should have been undertaken. The results from the TAG appraisal are essential in understanding the potential impacts to air and changes in emissions from each Scheme option.

The results from the TAG assessment would allow a preferred scheme to be identified. Consequently as a TAG assessment has not been undertaken, the application is therefore incomplete.

Assessment Conclusions

- 2.15 The overall conclusion for the air quality assessment is that each Scheme options would have no significant effect on air quality. However, discounting the above methodological findings, it is considered the air quality assessment could provide a comparison against each scheme option to identify a preferred scheme. This could include a comparison against the number of properties likely to experience an adverse impact and beneficial impact; and details on the greatest increase and reduction in predicted concentrations both at local receptors and at ecological sites.
- 2.16 Comparing the Scheme options, it is considered the Clients preferred option, as Magenta, could be a preferred route for further promotion due to the greatest number of properties experiencing a beneficial change (as 53 receptors); and the greatest reduction in annual mean nitrogen dioxide as $18.0 \mu\text{g}/\text{m}^3$ at Ford Road.
- 2.17 In comparison, the Cyan and Beige routes have the highest number of adverse changes to air quality (as 41 and 39 receptors worsening in air quality). Should an assessment of all properties be undertaken, it is likely the Cyan and Beige routes would have more receptors experiencing a worsening of air quality.

3 Summary

- 3.1 Whilst the general scope and methodology to the air quality is assessment is considered acceptable there are a number of methodological failings which could impact the conclusions of the assessment. There are three major issues with the air quality assessment, and as a result the application can be considered incomplete, which include:
- The assessment has excluded an assessment on Chantry Mill Special Site of Scientific Interest (SSSI); the Binsted Wood Complex Local Wildlife Site (LWS) and Rewell Wood Complex LWS all located within 200m of the modelled road;
 - Only individual receptors have been modelled rather than properties in areas that are at a reasonable risk of exceeding that air quality thresholds; and
 - A TAG appraisal for local air quality has not been undertaken and should be presented in the air quality assessment. The results from the TAG appraisal are essential in understanding the potential impacts to air and changes in emissions from each Scheme option.
- 3.2 There are the three following moderate issues, which could result in either a major or minor issue depending on further details:

- The air quality assessment has excluded an assessment of emissions from construction vehicles. However, given the long time period of the construction phase, and the potential cumulative impact of the construction works occurring with the existing congested road, it is considered indicative modelling should be carried out in order to determine the likely significant effects of each Scheme option.
- An assessment of construction dust has been undertaken based on 200 m from the source of construction activity. More recent guidance recommends that a 350 m boundary should be used. As such a 200 m boundary has the potential to underestimate the likely magnitude of impact.
- The air quality modelling assessment does not provide sufficient information that the influence of local terrain has been considered. This includes the use of a terrain file in the air quality model and the use of additional calculated vehicle emissions for changes in gradient. Should terrain data and vehicle gradient emissions be used in the air quality modelling this may result in revised modelled results.

- 3.3 The air quality modelling assessment has considered the impact of the Scheme options on the Air Quality Management (AQMA) in Storrington by applying an adjust factor. However no technical details are provided on the characteristics of the street canyon and .if the width of the road and height of the buildings remain consistent throughout the street canyon. Without providing this further detail, there is a risk the use of the adjust factor may not be truly representative of the entire street canyon.
- 3.4 It is considered the air quality assessment could provide further details and a comparison against each scheme option to identify a preferred scheme. This could include a comparison against the number of properties likely to experience an adverse impact and beneficial impact and the greatest increase and reduction in predicted concentrations both at local receptors and at ecological sites.
- 3.5 At this stage, based on the data included in the air quality assessment the Clients preferred option, as Magenta, should be taken forward to the detailed assessment stage by Highways England. This is due to the Magenta route having the greatest beneficial change to individual receptors (as 53 receptors); and the greatest reduction in annual mean nitrogen dioxide (as 18.0 $\mu\text{g}/\text{m}^3$ at Ford Road).
- 3.6 In comparison, the Cyan and Beige routes have the highest number of adverse changes to air quality (as 41 and 39 receptors worsening in air quality). Should an assessment of all properties be undertaken, it is likely the Cyan and Beige routes would have more receptors experiencing a worsening of air quality. If so, the Cyan and Beige routes should be discounted by Highways England, due to the number of properties in the local area having an adverse change in local air quality.



**Noise & Vibration
Review:
A27 Arundel Bypass
Environmental Assessment
Report**

October 2019



Experts in noise and vibration
assessment and management

Document Control

Client	GTA Civils & Transport	Principal Contact	[REDACTED]
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Job Number	119
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Report Prepared By:	[REDACTED] Principal Consultant
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Document Status and Reuse Schedule

Report No.	Date	Status	Reviewed by
119A1/F	1 October 2019	Final	[REDACTED] Director

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Noise Consultants Ltd
 6 Bankside, Crosfield Street, WA1 1UD Tel: 01925 937 195
contact@noiseconsultants.co.uk

Registered Office: Coldharbour Road, Bristol, BS1 1JF
 Companies House Registration No: 11811111

1 Introduction

- 1.1 Noise Consultants Limited (NCL) have been commissioned by GTA Civils & Transport to undertake a review of the Noise & Vibration Chapter (Chapter 11) of the Environmental Assessment Report (EAR) for the Project Control Framework (PCF) Stage 1 (Option Selection) of the A10 Arundel Bypass Scheme ('the Scheme').
- 1.2 The Scheme could consist of one of 5 Scheme Options each of which are considered separately within the EAR. The Scheme options are
- Option 1000
 - Option 1090
 - Option 0010
 - Option 7/A010
 - Option 7/A000 and
 - Option 0B01.
- 1.3 This review focuses on the noise and vibration impacts of each of the above Scheme options as detailed in the EAR. It also reviews the approach to the assessment to ensure that is robust and that the final route option has been selected based on an appropriate assessment.
- 1.4 This review covers the following issues
- whether the scope of the EAR Noise & Vibration Assessment submitted by the applicant is sufficient
 - whether the assessment is based on an appropriate methodology (i.e. is it 'fit for purpose');
 - the identification of any errors or omissions within the assessment and
 - whether the mitigation measures proposed are appropriate.
- 1.5 Where methodological failings are identified they are described as either a
- **Minor Issue** – weaknesses have been identified but the professional experience of the reviewers suggests that these are unlikely to affect the conclusions of the assessment
 - **Moderate Issue** – weaknesses have been identified which may or may not affect the conclusions¹ or

¹ An issue which is classified as moderate could thus move to being either a major or minor issue depending on specific known factors.

- **Major Issue** – in the opinion of the reviewers the failings of the assessment are highly likely to invalidate the reported conclusions.

2 Review

General Scope

- 1 In general the scope of the assessment is appropriate and the key noise sources are identified. The assessment of road traffic noise has been undertaken based on the Design Manual for Roads and Bridges (DMRB) which is a standard industry approach for road infrastructure projects and is deemed acceptable for the EAR of the Scheme options.

Policy and Guidance (Minor Issue)

- The policy and guidance documents referenced are appropriate to the assessment. Table 11 does not however contain reference to the latest World Health Organisation Guidelines which would typically be included however the WHO Environmental Noise Guidelines for the European Region (2018) are referenced separately on page 11 of the EAR.

Methodology

Baseline Noise Survey (Minor Issue)

- Appendix 11 'Baseline Noise Survey' Table 11 – it is typical that that daytime noise level in terms of LAeq10h would be lower than the values than for LA1018h. This is not the case for some of the long term measurement results and indicates that extraneous noise sources may be influencing the long term noise measurement results and not specifically road traffic.
- Appendix 11 'Baseline Noise Survey' states that the survey was conducted with reference to the Calculation of Road Traffic Noise (CRTN) however Appendix B of Appendix 11 'Noise Monitoring Forms' presents some measurement distances from the road as being less than 4m from the edge of the carriageway. CRTN states that "measurements should normally be not less than 4 metres and not more than 15 metres from the nearside edge of the carriageway".
- Based on the methodology adopted for the assessment of the options these issues are not considered material to the determination of the preferred option.

Construction

- The construction assessment has been undertaken in accordance with relevant methodology i.e BS 6881:1999/A1:2011. However at this stage a full construction noise assessment has not been

¹ Design Manual for Roads and Bridges HD 213/11, 2011

² Environmental Noise Guidelines for the European Region, WHO, 2018

³ Calculation of Road Traffic Noise, Department of Transport, Welsh Office HMSO, 1988

provided and could be provided at a later stage. This is considered appropriate as the focus of the EAR is with respect to the selection of a preferred scheme.

Operational Road Traffic Noise Assessment

- 1.0 Operational road traffic noise assessment has been undertaken using a noise model validated by measured data and with reference to relevant methodology i.e DMRB and CRTN.
- 1.8 The assessment years chosen for the assessment of operational road traffic noise in the short-term and long-term are appropriate with reference to DMRB methodology. The modelling has included consideration of committed developments.
- 1.9 The identification of residential dwellings potentially eligible for noise insulation under the ‘Noise Insulation Regulations (NIRs) 1975 as amended 1988’ has been listed as one of the ‘other factors’ in the determination of significance. The number of dwellings with the potential to qualify has been identified for each scheme option however no methodology has been provided to verify how this has been determined with reference to the Regulations. It is considered unlikely that that this will have a material effect on the outcomes of the assessment. One of the requirements to be fulfilled for noise insulation to apply is that the Relevant Noise Level must be at least 68 dB LA10,18-hour which is equivalent to the value set as the level above which Significant Observed Adverse Effect Level (SOAEL) in the EAR. To qualify the property must also be within 11m, 19m, 28m, 31m and 11m which show the number of properties above SOAEL for each scheme option the number is relatively low within 11m of the carriage way for each scenario. It is therefore considered to be unlikely that any potential issues with the methodology could result in a substantial change to the outcomes of the EAR and in terms of the determination of significance. However any potential failing determined with the methodology is likely to have a greater impact on the Scheme options which run through the centre of Arundel (e.g I10 and I9) when compared to those options which run further to the south of Arundel (e.g I/A1) as there appears to be a greater population density in this area.

Significance Criteria

Receptor Types

- 1.1 Significance criteria is not detailed in terms of residential/non-residential receptors. It is unclear whether the same significance criteria has been applied to both residential and non-residential noise sensitive receptors and whether indeed there are any of these receptors within the study area. It is

1 Noise Insulation Regulations, 1975 (as amended 1988)

2 The noise level expressed in dB as LA10,18-hour one metre in front of the most exposed of any windows and doors in a façade of a building caused or expected to be caused by traffic using or expected to use any highway. Noise Insulation Regulations, 1975 (as amended 1988)

therefore unclear whether the consideration of non-residential noise-sensitive receptors could change the conclusions made with regards to the respective schemes.

Construction (Minor Issue)

- 11 The number of properties within 100 metres of areas where construction activities might occur have been counted as an indicator of potential significant effect at this stage.
- 10 It is proposed to undertake a revised quantitative assessment once more information on construction plant and techniques becomes available. At PCF Stage 1 (Preliminary Design) the significance of effects will be derived from the thresholds in the 'ABC' method presented in BS 5228 including other contextual considerations.

Operation (Minor Issue)

- 10 DMRB methodology considers whether there is likely to be a change in noise level of 1 dB $L_{A1\text{eq}8h}$ or more in the short-term or 3 dB $L_{A1\text{eq}8h}$ in the long-term. The significance criteria described in the EAR is unclear as it states that "*the short-term magnitude of impact will be used as a starting point in determining significant effects. Magnitudes classified as moderate and major are likely to be categorised as significant effects*". However this is inconsistent with reference to DMRB as moderate to major in the short term corresponds to a noise change of at least 3 dB $L_{A1\text{eq}8h}$ whereas a short term assessment should focus on a noise change of at least 1 dB $L_{A1\text{eq}8h}$.
- 10 Other factors have been considered to determine significance e.g absolute level of noise with reference to SOAEL however it is not clearly stated as to how significance has been related to SOAEL.
- 10 Following review of the significance determined in the assessment section of the EAR it appears that the significance has considered other factors including the noise change in the long-term and exceedance of SOAEL which is considered to be appropriate. Therefore although the significance criteria as described in the EAR is misleading with reference to use of short-term and long-term magnitude of impact the determination of significance applied in the assessment is considered to be appropriate.

Noise Assessment

Mitigation Strategy (Moderate Issue)

- 10 It is noted in the EAR that the noise model has been used to generate a set of mitigated results for all Scheme options and the assessment has been based upon these results. The mitigation included reference to 1m high absorbent noise barriers of varying length for each Scheme option plus a low noise surface has been assumed for all scheme options. The EAR does not give details of how the

⁷ Environmental Assessment Report, Chapter 11, Paragraph 11.3.3.4, Highways England, August 2019

proposed barrier lengths/heights have been determined for the proposed location of these barriers. Typically it can be difficult to introduce 3m high barriers into existing residential areas due to constraints such as space and visual impacts. However the level of detail contained within the EAR is not sufficient to be able to comment on the viability/effectiveness or necessity of these barriers.

- 10 Any changes to the assumed mitigation and/or the ability to provide the mitigation may have the potential to alter the assessment outcomes and thus the selection of a preferred scheme. Some reassurance should be sought as to whether the assumed mitigation i.e. candidate barrier options and low noise surfacing are feasible and practicable. This is underlined by all of the options resulting in at least some significant adverse effects which based on the modelling and assumption would appear to be residual.

Construction (Minor Issue)

- 18 Potentially significant construction noise effects have not been determined at this stage. An indication of the number of properties with the potential to experience significant effects has been provided based on the number that fall within 100m of the nearest carriage way edge. This gives an indication of how the scheme options compare in terms of the likely number of properties affected. However this approach does not deal with wider construction requirements such as temporary alignment compounds and any night time works. Whilst it is considered appropriate to address this at a later stage it should be minded that construction noise can be as material to the consenting of such schemes as well as their operational impact.

Operation (Moderate Issue)

- 19 The potential for likely operational significant noise effects has been identified for each scheme option. It is unclear how the significance has been determined due to the significance criteria requiring more detailed explanation as mentioned above. The significance determined does however appear reasonable with reference to short term and long term DMRB and consideration of other factors primarily relating to SOAEL. (Minor Issue)
- 20 Significance relating to residential/non-residential receptors is not considered separately. Figures 11.11 to 11.19 refer to 'dwellings' therefore the effects on non-residential uses do not appear to be provided. It is considered that justification/confirmation on whether non-residential receptors have been included should be sought as there is the potential for significant effects to occur for noise sensitive non-residential uses. (Moderate Issue)
- 21 The number of dwellings with the potential to qualify have been identified for each scheme option however this assumes that the requirements of the NIRs have been applied appropriately in the absence of methodology being provided relevant to this. (Minor Issue)

Assessment Conclusions

- 1.11 Whilst it is recognised that the selection of a preferred option takes into account a range of factors it is noted that the Scheme option 10/A1 is the second most favourable option in terms of number of properties affected by noise during both construction and operational phases. It is therefore considered that the 10/A1 option could be considered as a preferred option when comparing the six Scheme options.
- 1.12 The EAR determines that Options 10 and 109 affect the most properties during both construction and operational phases. It is therefore considered that these two options could be considered as the least preferred options when comparing the six Scheme options.
- 1.13 It should however be considered that a number of moderate issues have been highlighted in this report which have the potential to change the outcomes of the assessment.



The OneArundel A27 Bypass Support Group

c/o 65 Tarrant Street
Arundel
West Sussex
BN18 9DJ

████████████████████
18th October 2019

████████████████████
A27 Arundel Bypass Consultation
Highways England
Bridge House, 1 Walnut Tree Close
Guildford, Surrey, GU1 4LZ

Dear ██████████

The Highways England A27 Arundel Bypass Proposals – Public Consultation Response

I am Chairman of the OneArundel A27 Bypass Support Group which comprises a group of like-minded individuals who support the essential and long-overdue proposal for the building of an off-line, dual carriageway A27 Arundel bypass. We are aware that the A27 is already one of the most unreliable all-purpose trunk roads in England, and that at Arundel the bottleneck causes congestion, delays, a high accident rate, air pollution, diversions onto unsuitable routes, and it cuts the town into two halves. Thus we and our 600-plus signed-up supporters believe that the delivery of an effective solution in the shape of a bypass will benefit local businesses and residents, as well serving national and county-wide interests.

I therefore welcome the opportunity to comment on the Highways England public consultation document which sets out the six options for improving the A27 at Arundel by replacing the existing single carriageway road with a new dual carriageway, linking together the two existing dual carriageway sections on either side of the town, and I set out our Group's views in the attached comprehensive response document.

In essence, we believe that there is a clear need for a bypass on the A27 at Arundel, and that such a new road is an essential infrastructure requirement in the national interest. In respect of the six colour-coded route Options we recommend that the Cyan, Beige, Crimson and Grey Options should all be rejected as unsuitable and that, whilst both the Amber and Magenta Options have relatively similar environmental disadvantages especially in relation to the SDNP and the associated ancient woodland, we believe that the Amber Option is clearly the worst of the two, and therefore that the Magenta Option should be adopted as the route for the Arundel Bypass.

I hope you find our comments and views helpful, and we look forward to seeing your proposed new 'preferred route' in due course.

Yours sincerely,

████████████████████



The OneArundel A27 Bypass Support Group

Highways England A27 Arundel Bypass Public Consultation

Response from The OneArundel A27 Bypass Support Group

October 2019

The Highways England A27 Arundel Bypass Proposals

Response to the Public Consultation (30 Aug 19 to 24 Oct 19)

by

The OneArundel A27 Bypass Support Group

Introduction

On 30 August 2019 Highways England published a public consultation brochure setting out the options for improving the A27 national trunk road at Arundel in West Sussex by replacing the existing single carriageway road with a new dual carriageway bypass, linking together the two existing dual carriageway sections on either side of the town.

The brochure provided details of six possible route options for the A27 at Arundel, together with information about the key benefits and impacts of each option, and invited comments aimed at helping Highways England to decide on a preferred route.

The purpose of this response by the OneArundel A27 Bypass Support Group is to respond to the consultation exercise, to emphasise the need for an A27 bypass at Arundel, to consider the pros and cons of each of the six options, Cyan, Beige, Crimson, Amber, Magenta and Grey, and to set out the reasons why we believe that the Magenta Option should be selected as the preferred route for the bypass.

The OneArundel A27 Bypass Support Group

OneArundel comprises more than 600 like-minded individuals who support the essential and long-overdue proposal for the building of an off-line, dual carriageway A27 Arundel bypass, and we welcome the Government's commitment to its early provision. We set up the Group in April 2017 in order to represent the 'silent majority' who have aspired to see a solution to the local traffic congestion for many years, and especially in order to counter the vocal national, regional and local anti-road, anti-car and anti-bypass groups who were seeking to dominate centre-stage in the debate.

The A27 is already one of the most unreliable all-purpose trunk roads in England, and at Arundel the bottleneck causes congestion, delays, a high accident rate, pollution, diversions onto unsuitable routes, and it cuts the town into two halves. Thus we believe that the delivery of an effective solution in the shape of a bypass will benefit local businesses and residents, as well as serving national, regional and county-wide interests. We therefore resolved to work together with other interested individuals, businesses and organisations to support the work of Highways England, with the aim of being fully ready to participate in the public consultation.

OneArundel's opening position in mid-2017 was to support what was then called the 'pink/blue' route, which had been designated as the 'Preferred Route' by the Department for Transport in 1993. Then, as a result of the information in Highways England's 2017 public consultation brochure we switched our support to the route known as Option 5A, However,

since then new facts have become available, the public consultation exercise is being re-run and, as a result, OneArundel has revised its position and now supports the Magenta Option.

The Purpose of this Response

The purpose of this response is primarily to answer two major questions:

- a. First, does Arundel need a bypass?
- b. Second, if so, which is the best of the six Options suggested by Highways England (Cyan, Beige, Crimson, Amber, Magenta and Grey)?

The Need for a Bypass at Arundel

Whilst for a variety of reasons it has not yet proved possible to build a bypass on the A27 at Arundel, the need for such a road has existed for well over 30 years, and whilst the reasons for that need have not changed in principle, the need for such a bypass has become even more urgent as the years have passed, as the congestion has become greater, and as its adverse impact on the South Downs National Park has become more intrusive.

The first formal consultation exercise began in 1987, and was based on the fact that:

The existing A27 at Arundel is mainly single carriageway with poor alignment and visibility, steep gradients and at-grade junctions. Traffic is heavy and congestion occurs.

After protracted consultations in the late 1980s and early 1990s, the Department for Transport published a formal 'Preferred Route Statement' in July 1993, stating that the Secretary of State had decided that the bypass should be built on what was defined as the 'pink/blue' route, and that the start of construction would depend on the completion of statutory procedures and the availability of funds. The project was then included in the Government's Future Roads Programme, before being put on-hold and remitted for further study by the new Government in 1997.

Subsequently the South Coast Multi-Modal Study (SoCoMMS) review took place in 2002 and, after its study of the need for and against an A27 bypass of Arundel, it concluded that the key issues in the Arundel area were:

- Congestion on the A27 at Arundel gave rise to very heavy traffic in local villages and other areas.
- Traffic levels on the single carriageway section through Arundel [were] equivalent to [the] neighbouring dual carriageway.
- Most A27 traffic was passing through Arundel.
- The traffic flow was already in excess of Highways Agency 'congestion reference flow'.

- Safety issues on the A27. The accident rate was twice the national average rate for the type of road and four times the national average for dual carriageways.
- Severance was caused by high traffic flows on the A27 through Arundel.
- There was poor accessibility to Littlehampton on the A284 north-south road.

SoCoMMS therefore recommended that the Government's list of 'Targeted Road-based Improvements' should include an Arundel bypass, with [a] recommendation that [the] previous preferred route (pink-blue) was taken forward. Subsequently, and despite being supported by DfT officials, this recommendation was cancelled personally at the very last minute by the Secretary of State on environmental grounds as a result of strong lobbying by Defra, the Countryside Agency and various anti-road groups. Nevertheless the overall national need for such a bypass remained.

Seven years later, the GOSE-sponsored South East Plan, which set out the 'Regional Spatial Strategy for the South East of England' and which was published in May 2009, included statements in Section 17, covering the "Sussex Coast", which said that:

- [There was a need to] build upon and help deliver major improvements to the strategic transport infrastructure and services both to reduce its peripherality and to improve accessibility within the sub-region.
- Key measures include delivering improvements to east-west transport links by road to improve accessibility, facilitate strategic development opportunities and enable the better functioning of overlapping local labour and housing markets.
- Better east-west transport links, especially the A27 will improve complementary connections with other key sub-regions and accessibility within the sub-region.
- Key issues to be addressed [are the] highway capacity issues on the A27 on the A27/A259 at Arundel and Worthing.

Also, the associated business-backed SEEDA 'Regional Economic Strategy 2006-2016: A Framework for Sustainable Prosperity' reinforced these needs by stating that:

- To address congestion and avoid the tipping point that will undermine the region's competitiveness, we need to focus on solving bottlenecks in the infrastructure systems.
- [There was a need to] reduce road congestion, [and to] invest in transport to support strategic economic corridors [of which a] specific priority [was] the South Coast (including the A27 at Arundel).

Then in 2015 the Department for Transport published its A27 Corridor Feasibility Study, the 'Summary' section of which confirmed that it was:

One of six studies undertaken by the Department for Transport to look at problems and identify potential solutions to tackle some of the most notorious and long-standing road hot spots in the country.

The aim of the A27 Feasibility Study, which took place between spring and autumn 2014, was to identify the opportunities and understand the case for future investment solutions in the A27 corridor, particularly at Arundel and at Worthing, that were deliverable, affordable and offered value for money.

The study analysed the current and future performance of road traffic on the A27 corridor and, as far as Arundel was concerned, it established that:

- Over 60% of work-related commuter journeys in the coastal area are made by road.
- Goods vehicles represent more than 15% of the daily traffic flows along the A27, and a third of this is heavy goods traffic.
- For most of its 67 mile length the A27 is dual carriageway. Four stretches of road remain single carriageway [*including*] at Arundel. Such sections of road tend to experience peak hour congestion and poor time reliability.
- These single carriageway sections are further constrained by congestion resulting from limited capacity at at-grade junctions [*including two at Arundel*] at the Ford Road roundabout and at Crossbush junction.

The Feasibility Study's conclusion in respect of an A27 Arundel bypass was that the analysis showed that a new bypass at Arundel could generate journey time and accident savings and could have beneficial impacts on journey time reliability. As a result, the Government announced in December 2014, as part of its Road Investment Strategy I, that it had earmarked £250 million for a new dual carriageway bypass on the A27 at Arundel to link together the two existing sections of the road on either side of the town. Highways England was directed to take the project forward, and its starting point was to be the previous preferred route (pink/blue), subject to consultation with the South Downs National Park Authority, local government and the public on this, and alternative options.

Highways England conducted a non-statutory public consultation in September and October 2017, asking for comments in relation to three possible route options: Option 1, Option 3 and Option 5A, as a result of which a slightly modified version of Option 5A was selected as the 'Preferred Route' in May 2018. Unfortunately even then this did not settle the on-going disputes about the various routes, there were two applications for Judicial Review, and it was discovered that new information had become available. Thus there was a need for a second non-statutory public consultation exercise, and it is the matters in the latter that now need to be addressed.

The Current Need for an A27 Arundel Bypass

Turning now to the 2019 Highways England public consultation brochure, the first implied question is:

“Does Arundel need a Bypass”?

The national and local reasons for needing such a bypass were clearly set out in the HE's 2017 consultation documents and its supporting papers, and they emphasised that:

- The A27 is a strategically important corridor on the south coast which is used by both long distance strategic traffic and local traffic alike. The Arundel section is one of a number of bottlenecks which causes delay and variable journey times due to the single carriageway alignment and the number of junctions.
- There are existing capacity constraints at Arundel due to the single carriageway section through Arundel, worsened by constrained capacity at the Ford Road roundabout and Crossbush junctions.
- The current demand exceeds the theoretical capacity of a single carriageway road in Arundel.
- Future growth will result in the demand further exceeding capacity through Arundel, and [*unless improved*] this section of the A27 will act as a constraint to the planned growth in housing and employment in the corridor.
- The A27 results in severance through the town of Arundel.
- Two-thirds of the traffic is through-traffic, whilst the remaining third is local.
- At Arundel, the A27 is already operating at 100%-150% capacity. Due to population growth and increased economic activity in the region there will be more traffic using the A27 through Arundel in the future.
- The single carriageway section and junctions through Arundel do not cope with existing traffic. This often results in long queues of traffic approaching Arundel. Due to congestion, some longer distance traffic diverts away from the A27 to alternative routes which are less suited to high volumes of traffic. To the north, this includes the B2139 through the South Downs National Park and local villages (Houghton, Amberley and Storrington). The traffic disrupts the otherwise tranquil nature of the SDNP and affects the quality of life of those living alongside the route.
- There are an above average number of accidents on the A27 between Yapton Lane and Crossbush.
- Without improvement, the congestion and delay on the A27 through Arundel will increase in the future.
- Therefore it is clear from the modelling results that a bypass is required to provide the network improvements and reduce delay and improve travel time.

In summary, Highways England confirmed in 2017 that improving the A27 at Arundel would:

- Considerably reduce the existing queues and delays.
- Improve journey times, air quality and road safety.
- Remove traffic from less suitable routes within the South Downs National Park.

- Help businesses to reduce their costs, support expansion and provide new employment opportunities.
- Support the growth of tourism.

These conclusions clearly showed there is a strong national and regional imperative for the provision of an A27 bypass at Arundel, as has been the case ever since the first consultation in 1987. The major factor that has changed in the past 30 years is that traffic has increased and the congestion has become worse as time has passed, and it is forecast to get even worse in the future. Thus the need for a bypass at Arundel is driven more by factors external to Arundel, rather than by purely local factors.

These arguments in support of the need for an A27 bypass at Arundel have once again been summarised in the Highways England 2019 consultation brochure, viz:

- 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, serving a combined population of more than one million 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.
- 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.
- The A27 currently has a poor safety record, with a higher than average accident rate for rural A-roads.
- Relatively poor transport connectivity in the area has contributed to pockets of deprivation by restricting access to employment opportunities.

The answer to this question is therefore, as set out in and supported by the Government in the 2015 Feasibility Study document, that Arundel needs a bypass, and that such a new road is an essential infrastructure requirement in the national interest.

The Highways England 2019 Options

In response to this clear need for improvements to this national infrastructure asset, Highways England has developed a scheme, of which the stated objectives are to:

- To improve the safety of travellers along the A27 and consequently the wider local road network.

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

Highways England has therefore proposed six possible colour-coded dual carriageway route Options for public consideration:

- Cyan – a short on-line route through Arundel via a flyover at the Ford Road roundabout.
- Beige – a short on-line route through Arundel via an enlarged Ford Road roundabout.
- Crimson – a medium-length off-line route through the SDNP and the ancient woodland in Tortington Common.
- Amber – a long off-line route passing through the southern edge of the SDNP north of Binsted.
- Magenta – a long off-line route passing through a very small section of the southern edge of the SDNP
- Grey – a long-off-line route which avoids the SDNP, but which passes very close to the large village of Walberton.

The Cyan and Beige On-Line Options

In respect of the Cyan and Beige Options, there are two fundamental points which dwarf all the other detailed points which can be made in either support of or in opposition to them.

First, as set out in Highways England’s “A27 Arundel Bypass Scheme Assessment Report” published in May 2018, the similar 2017 on-line Option 1 *did not meet the stated RIS policy of providing a bypass at Arundel.*

Second, as set out in Highways England’s “A27 Arundel Bypass Preferred Route Announcement” published in May 2018, it was explained, in respect of the on-line Option 1 that:

Widening the A27 through the centre of Arundel would increase severance i.e. the feeling of division in the town, and overall there were fewer safety benefits to be gained.

We also had concerns over the ability of the improved road to deal with anticipated future traffic volumes, particularly at Ford Road junction.

The option therefore failed to meet the scheme objectives.

We considered design changes that could help to mitigate for this, but they would impact significantly on both the environment and the local community. The potential design changes would also increase the cost of the scheme and lower the overall value for money.

We discounted the option on these grounds.

In essence, these points remain as valid in 2019 as they did in 2017 and 2018. Both the Cyan and Beige Options are on-line improvements rather than bypasses, and are therefore contrary to the RIS policy. Similarly, whilst both Cyan and Beige incorporate design changes to the 2017 Option 1, they would both have major adverse impacts on the environment and the local community, as well as emphasising the severance of the town. Thus, to use Highways England's own words in their 2018 documents, they should both be discounted on these grounds. Indeed, they should never have been put forward in the first place.

Both Options would involve the building of a new dual-carriageway road from Crossbush to the bridge by the Ford Road roundabout, a new dual-carriageway bridge over the river alongside the existing bridge, and the conversion of the single-carriageway Hospital Hill into a new dual-carriageway road until it meets the existing dual-carriageway just to the west of the White Swan Hotel. Cyan would involve a flyover at the Ford Road roundabout with no direct access to the local road network, and Beige would involve a huge re-designed Ford Road roundabout.

There are just three factors which suggest, at first sight, that the Cyan and Beige Options should be given serious consideration. They are:

- They are the cheapest Options.
- They would be the shortest and most direct routes linking the existing ends of dual carriageway either side of Arundel.
- By following, in part, the existing A27 corridor through the SDNP, they would avoid creating a new road corridor within areas of environmentally sensitive open countryside to the south of the town.

On the other hand, there are a considerable number of significant disadvantages, these include:

- Both Options would impact adversely on the South Downs National Park and the adjacent ancient woodland. In respect of the SDNP, both Options would add an additional 1.9 kms of dual carriageway to the A27 which already runs through the southern part of the Park. In respect of ancient woodland, the Cyan Option would destroy 8.37 hectares, whilst the Beige Option would destroy 7.44 hectares.

- Both Options would continue to divide the town of Arundel at the Ford Road roundabout. Neither Option meets the specific and important scheme objective of reducing the existing community severance caused by the A27 through Arundel.
- The Beige Option's re-designed Ford Road roundabout would be controlled by traffic lights, so ensuring stop-start traffic. Also, the volume of traffic using this roundabout would increase by over 65% (from 28,200 to 46,900 vpd) and would be nearing its maximum capacity by 2041.
- Both Options would have a major detrimental impact on the people who live in their immediate vicinity. For example, in the Cyan Option, there would be 120 homes within 50 m of the road and 427 homes within 100 m of the road. In the Beige Option, there would be 142 homes within 50 m of the road and 429 homes within 100 m of the road. Of the other Options, the largest figures would be 41 m and 98 m respectively. All would be disadvantaged to some degree or another.
- Both Options would cause an increase in the local noise levels and pollution in the vicinity of the Ford Road roundabout and, as illustrated in the Map on page 23 of the consultation brochure that there is a "noise important area" immediately to its north. Also, the proposed noise mitigation measures involving 3 m high absorbent noise barriers on each side of the high-level Ford Road roundabout flyover associated with the Cyan Option would be extremely visually intrusive.
- Both Options would impact badly on the important cultural and heritage assets in Arundel. For example, some 250 designated cultural heritage assets have been recorded within the inner and wider study area. Of these, over 200 are statutorily designated (of national importance), including 5 Scheduled Monuments, 4 Grade 1, 7 Grade II* and 205 Grade II Listed Buildings. In contrast, the Crimson, Amber, Magenta and Grey Options all have far fewer heritage assets in the study areas, even less of which are statutorily designated.
- Both Options would increase the amount of traffic transiting the A27 in the SDNP north of Binstead Wood and Tortington Common by 65%.
- Both Options would have difficulty taking account of the physical limitations of Hospital Hill, with its poor alignment and visibility and steep gradients - as highlighted in the DfT's 1993 Preferred Route Statement.
- The Beige Option may not take into account the increase in traffic on Ford Road itself as a result of ADC's recent proposal for a major housing development at Ford comprising at least 1,500 new homes and Clymping comprising 400 new homes.
- Both Options would have a major detrimental impact on those living close to the Ford Road roundabout and Hospital Hill, especially in Fitzalan Road, Wheelwrights Close, the west end of Maltravers Street, Surrey Street, lower Torton Hill, Canada Road and Jarvis Road. They would also impact badly on the Riding Stables in Park Place.

- Both Options could exacerbate the flood risk to properties in the vicinity of the Ford Road roundabout. This is already the area at greatest surface water flood risk in Arundel, and the new bridge and its connection to the roundabout would need to be built directly over the course of Spring Ditch, which is one of the most important flood-related watercourses in this vicinity of the town.
- Both Options fail to acknowledge the poor physical state of the existing A27 bridge over the River Arun, which itself may need major renovation or replacement, or the fact that the sheet steel piling (SSP) on the river wall under the west side of the bridge is already in a poor state and may need to be replaced within 10 to 20 years.
- Both Options would involve adverse impacts on the Hospital Hill section of the dual carriageway for vehicles and pedestrians wishing to access and exit Jarvis Road, Tortington Lane, Park Farm, Arundel Cricket Club, the White Swan Hotel and, especially, Arundel Hospital. Walking to and from the Hospital may well become a matter of life and death. This brings the prospect of additional accidents as well as reduced road safety. Both Options might also force the closure of the White Swan Hotel.
- During the necessarily extended construction period for both Options there would be a lengthy and large increase in traffic disruption, which would bring its own additional noise and air pollution. Additionally, this disruption would lead even more people to avoid using the A27 near Arundel, thus increasing the burden on local roads that are not designed to take a higher level of traffic. It would also have a severe damaging effect on the economy of Arundel as there will be fewer shoppers and tourists visiting the town during the construction phase. Indeed, after three years this is likely to become a habit, and people will avoid Arundel even after completion. More details of possible construction problems and their implications are set out in Annex A.
- In the event of this new road being blocked by either an accident or the need for maintenance, there would be no practical local diversion available other than through the narrow town centre.
- It is very likely that the Beige Option would increase the amount of rat running through both the Torton Hill area and Arundel High Street as drivers would continue to seek to avoid the Ford Road roundabout, especially at peak times.
- The Beige Option would not resolve the problem of HGVs using Ford Road, a problem that, according to WSCC, can only be properly resolved by the construction of a bypass which includes an access from Ford Road where it is crossed by a new bridge.

In summary, although the Cyan and Beige on-line Options may be the cheapest, and therefore be superficially attractive, in practice they are likely to be the very worst Options, especially as they would involve more than 46,000 vpd using the Ford Road roundabout compared with only some 28,000 vpd now (which is quite bad enough). Also, they are the worst Options for alleviating the amount of east-west traffic which runs through the SDNP, and they would have a myriad of adverse implications which would damage the historic town of Arundel.

OneArundel therefore recommends that the Cyan and Beige on-line Options should be rejected as unsuitable. These two on-line routes would have many damaging direct and

indirect implications for Arundel, and we do not support the Highways England proposal that the A27 to continue to run through the town.

The Crimson Option

The Crimson Option, which is essentially the old pink/blue preferred route, would comprise a new 6km off-line dual carriageway linking Crossbush junction with the existing A27 close to Havenwood Caravan Park to the west of Arundel. It would go through some 2.3km of the South Downs National Park, including through about 20 hectares of Tortington Common's ancient woodland.

Five significant changes have taken place since 1993 when the pink/blue route was formally designated as the Government's preferred route. These are:

- The establishment of the South Downs National Park which includes Tortington Common to the south of the current A27, which was previously the southern boundary of the pre-SDNP AONB.
- The redefinition of ancient woodland, which now includes the re-planted Tortington Common, as well as Binsted Wood.
- The designation of Binsted Wood, Tortington Common and Stewards Copse (close to Arundel) as the Binsted Wood Area of Special Nature Conservation Interest (SNCI).
- The publication of the National Planning Policy Framework (NPPF) which gives emphasis to the protection of National Parks and ancient woodland.
- The publication of the National Networks National Policy Statement (NNNPS) which governs nationally significant road and rail infrastructure projects, as is the case with this A27 Arundel Bypass proposal.

This route was included in the 2017 consultation purely because it had previously been designated as the Government's preferred route and even though it was very unlikely to be taken forward. Indeed, as set out in Highways England's "A27 Arundel Bypass Preferred Route Announcement" published in May 2018, it was explained, in respect of the off-line Option 3, that:

This option was the least popular option at consultation, and it had the greatest impact on areas of ancient woodland and the South Downs National Park. We discounted it on these grounds.

There was never any likelihood of this Option being given a seal of approval in response to the 2017 consultation, after which it was peremptorily discounted on over-riding environmental grounds, and exactly the same arguments against it apply in 2019.

In detailed terms, despite the fact that it would impact adversely on very few people and properties as the new road passed through the SDNP's Tortington Common and the associated ancient woodland, the Crimson Option would still involve some 48,000 vpd using the A27 through the South Downs National Park, which would be a 71% increase compared with the current traffic figures.

OneArundel therefore recommends that the Crimson Option should not be taken forward for further consideration

The Grey Option

The Grey Option was previously designated as Option 5B by Highways England prior to the 2017 consultation exercise. However, despite the fact that it would even then have avoided the South Downs National Park and ancient woodland HE, as explained in the 2017 consultation brochure, ruled it out of consideration at that time on the grounds that it:

Significantly exceeded the allocated budget, and provided less value for money than the options being consulted upon.

It was obvious to HE that the Option 5B route would therefore be very unlikely to be taken forward, and so no further efforts were taken to allow the public to debate the possible advantages and disadvantages of this route.

On the other hand, one of the statutory requirements of proposing to build new roads through National Parks, as set out in National Planning Policy and the National Network Planning Policy Statement, was that road building should be avoided in National Parks unless there were no alternatives. The South Downs national Park Authority therefore objected to the omission of the Option 5B route from the 2017 consultation on the basis that such an alternative had not been properly considered. Thus HE has now included this route outside the SDNP as one of the six Options in the 2019 consultation.

The Grey Option has several advantages when compared with the other five Options:

- It is the longest, straightest and safest Option.
- None of the route would be within the SDNP.
- It would reduce the amount of traffic using the current A27 through the SDNP by 84%.
- It would be the best route in relation to reduced travel times, reduced congestion and improved journey time reliability.
- It is the best route for minimising environmental impact, and it would only affect 1.49 hectares of woodland.

However, in contrast, it has two major disadvantages:

- It is the most expensive of the six Options and is therefore at the very limit of the possible budget.
- There are 41 properties within 50 m and 98 properties within 100 m of the scheme. These are mostly in the village of Walberton. Also, the route passes very close to the area of land in the north of the village that is already earmarked for additional housing development. It would therefore impact very badly on Walberton village and its inhabitants.

Thus, even though this route would be completely outside the SDNP, the disadvantages outweigh the advantages, and OneArundel does not therefore support the Grey Option.

The Amber and Magenta Options

Each of these two remaining long off-line Options run south of Arundel, with both of them just touching the SDNP and impacting on small amounts of ancient woodland. However they

each have a number of negative implications and, on the assumption that both of the on-line Options (Cyan and Beige) as well as the off-line Crimson and Grey Options, have too many disadvantages to justify being taken forward, it is a matter of deciding which of these two remaining possible Options is the least damaging on environmental grounds.

The Amber Option, which is a slightly modified version of the 2017 consultation's Option 5A, would be a new offline dual carriageway linking Crossbush junction with the existing A27 in the vicinity of the Yapton Lane junction to the west of Arundel. It would go through farmland along the southern edge of the South Downs National Park, as well as about 6 hectares of ancient woodland to the north of the small hamlet of Binsted near Walberton village. However, this option, which was designated as Option 5A in the 2017 consultation exercise was the subject of the Judicial Review submission from one of Binsted's residents on the basis that the possible environmental damage had not been given sufficient consideration by Highways England.

It seems most unlikely that the Amber Option will have sufficient advantages to justify its reinstatement or retention as the Highways England preferred route.

On the other hand, the new Magenta Option which would run just to the south of the Amber Option and thus suffer from many of the same environmental disadvantages as the latter is not quite so damaging to the local countryside and its associated wildlife.

OneArundel has therefore assessed which of these two Options (Amber and Magenta) would be best for Arundel. There are advantages and disadvantages associated with both of the Options, but having previously been a strong supporter of the 2017 consultation's Option 5A which, in its slightly modified form, is now called Amber and is still formally designated as Highways England's preferred route, OneArundel has changed its view, and we are now convinced that the Magenta Option is the best of these two routes for the building of the necessary dual carriageway off-line A27 bypass at Arundel.

The reasons why we have reached this conclusion are as follows:

- Whilst the Magenta Option is slightly longer than the Amber Option, it would be slightly cheaper.
- Whilst both Options would impact adversely on the South Downs National Park, as well as the local ancient woodland, and therefore need to be given special consideration under national planning policy, the impact of the Magenta Option would be slightly less than that of the Amber Option.
- The Amber Option would result in the destruction of 5.33 hectares of ancient woodland, whereas the Magenta Option 5A would result in the destruction of only 3.51 hectares of ancient woodland. Similarly, whilst 1.97 km of the route of the Amber Option would pass through the SDNP, the equivalent figure for the Magenta Option would be only 0.74 km
- In respect of trees, woodland and wildlife it is the view of the South Down National Park Authority that whilst the Magenta Option would have many of the same adverse impacts as the Amber Option, the latter would result in greater direct loss of ancient woodland, veteran trees, other woodland, wood pasture and parkland. It would also have a greater adverse impact on several rare bat species.

With both Options impacting directly on the SDNP, it is important that Highways England should respect the Park and its special qualities in its decision making. The SDNP is a nationally designated landscape, HE has a statutory duty to have regard to the purposes of the Park, and a key issue is that any road building in a National Park must be in the national interest, and that no practical alternatives are possible.

National planning policy requires the Secretary of State to not grant consent for any development that would result in the loss or deterioration of irreplaceable habitats including ancient woodland, as well as saying that the Secretary of State should refuse development consent in National Parks except in exceptional circumstances and where it can be demonstrated that it is in the public interest

Thus, on the basis that the need for a bypass at Arundel is essential in the national interest and that if the Grey Option is eliminated from consideration and that there is therefore no suitable and affordable alternative route which would not impact adversely on the SDNP, we have assessed which of the Amber and Magenta Options would be most likely to receive the least opposition from the Government and its Planning Inspectorate. Having previously been a strong supporter of Highways England Option 5A which was designated as its Preferred Route in 2017, OneArundel is now convinced that if an A27 Bypass is to be provided at Arundel then, after eliminating the Cyan, Beige, Crimson and Grey Options, the Magenta Option is the best of the remaining two Options (Amber and Magenta) that have been put forward by Highways England for public consultation.

OneArundel therefore gives the Magenta Option its strong support, and recommends that it be adopted as the Preferred Route for the off-line dual carriageway A27 bypass at Arundel.

Conclusion

The OneArundel A27 Bypass Support Group welcomes the opportunity to respond to the Highways England consultation concerning the need for improvements on the A27 trunk road at Arundel in West Sussex.

We believe that there is a need for a bypass on the A27 at Arundel and that such a new road is an essential regionally important infrastructure requirement in the national interest. We have therefore carefully considered the consultation questions.

In respect of the six route Options put forward by Highways England for public consultation, OneArundel recommends that the on-line Cyan and Beige Options should be rejected as completely unsuitable, particularly as the A27 would continue to run through the town.

Both the Crimson and Amber Options have considerable environmental disadvantages, especially in relation to the SDNP. Of the two remaining options, the Grey Option is clearly the worst due to its likely cost and the significant adverse impact on people and properties in Walberton.

Although we are aware of the negative implications of building a new road in the SDNP and of the associated statutory restrictions, there is a clear national requirement for this bypass. However, because of the local geography, there are there no other suitable and affordable routes which avoid the SDNP, and we believe that Highways England's Magenta Option, with its route through open countryside along the southern boundary of the Park to the west of Arundel, is the best way of meeting the long-desired and fully justified A27 bypass around Arundel. It is fully justified in the circumstances.

The Construction of the Cyan and Beige Options

This is professional advice from an Arundel resident who is the Chairman of a National Civil Engineering Company (September 2019)

1. The construction period is expected to be 3 years. If either the Cyan or Beige Options are taken forward, the largely on-line build will be extremely disruptive and have an adverse impact on the A 27's through traffic and local residents alike.
2. Traffic management during the build period of both Options will be complex, creating a level of confusion, indecision and consequently an attenuated delay in traffic flow:
 - a. This will have a negative impact on travel times and on air quality.
 - b. People will avoid using this stretch of the A27, thus increasing the burden on local roads which are not designed to take a higher level of traffic.
 - c. This will have a damaging effect on the economy of Arundel as there will be fewer shoppers and tourists visiting the town during the construction phase.
 - d. Over three years this will become habit, and people will avoid Arundel even after completion.
 - e. Narrow running will increase the risk of accidents for vehicles, cyclists and pedestrians.
 - f. Pedestrian crossing points will be limited, adding to the inconvenience.
 - g. Multiple interfaces will need constant management and control, but will still be exposed to failures in public or contractor behaviours in managing or complying with those controls. Unauthorised vehicles entering the works area are an ever-present risk in highway construction and are surprisingly common. This will impact the Highways England "aiming for zero" (health and safety strategy) and "raising the bar" initiatives.
3. Although the Cyan and Beige Options are the shortest routes, it is clear that they will not be quicker to build. The current single-lane A27 has been used as a conduit for existing utility services for many years (gas, water, sewage, power, telecoms, etc). Some will be known, but many will be unknown and uncharted. These will have to be located, diverted or upgraded. This process is complex and will extend programme periods, cost and disruption. Onsite works will require temporary traffic light control working due to the limited width of the working corridor, as well as the need to cross the carriageway.

4. The construction corridor in the Cyan and Beige Options will be narrow, and construction productivity will be low. Also, there will be a greater impact on the travelling public because of the movement of the construction interface. Some of the work may need to be carried out at night to enable road closures / single file traffic. Total road closure may be required for certain activities (such as the installation of the new bridge over the River Arun).
5. The Cyan and Beige Options will not be as serviceable or maintenance free as a new off-line solution. As the construction will be carried out in 'bite size' pieces in order to maintain traffic flow, there will be considerably more interfaces and thus the potential for weaknesses.
6. The Beige Option will not remove the fundamental and conflicting traffic flows or subsequent potential for congestion. The Ford Road roundabout would be similar to the Liss roundabout on the A3 which has significant tailbacks at peak times.
7. The Beige Option would be the least safe for road users as there would still be an 'at grade' roundabout where the Ford Road meets the A27.
8. All other Options would be built almost entirely off-line and would be therefore be faster, safer and much less disruptive to the travelling public, local residents and the construction workforce. Additionally these Options would result in less air pollution during the build.
9. Even though the overall air quality might improve as a result of the Cyan and Beige Options, it would undoubtedly worsen the local air quality in the vicinity of the Ford Road roundabout.

[REDACTED]

Sent: 24 October 2019 20:01

To: A27 Arundel Bypass <A27ArundelBypass@highwaysengland.co.uk>

Subject: A 27 Arundel Bypass Consultation Response on behalf of the Poling Parish Meeting

Dear Sirs

Following a meeting of the Poling Parish Meeting at the Parish Church on 22nd October with the main agenda item being the formation of a consensus view of whether a bypass is needed and which of the preferred routes is to be recommended. The meeting was well attended where both verbal and written comments were considered. My intention was to be able to establish things as follows as our response is

- A village view on whether a Bypass was needed and
- which was the favoured route

Upon testing your website it is clear that it would not enable me to convey these simple views so I have used an email and this would appreciate your confirming that our collective views have been registered by return.

I am pleased to confirm that all but 1 resident considers that a bypass improvement is required and long overdue. All those who considered that a bypass is needed voted unanimously in favour of the **magenta** preferred route. I trust that this short email is enough to demonstrate and support West Sussex County and Arun District Councils support of the need for a Bypass and the preferred magenta route.

We thank you for the opportunity to participate in this consultation.

Best regards.



For Pulborough's future

Pulborough Parish Council

 Swan View, Lower Street, Pulborough
West Sussex RH20 2BF

 01798 873532

 clerk@pulboroughparishcouncil.gov.uk

 www.pulboroughparishcouncil.gov.uk

By email to:

A27ArundelBypass@highwaysengland.co.uk

22nd October 2019

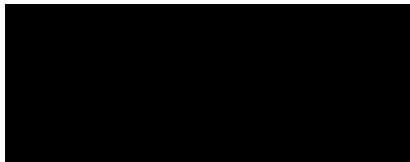
Dear Sir/Madam

**A27 Arundel Bypass Further Public Consultation:
Consultation Response from Pulborough Parish Council**

Pulborough Parish Council has considered the options available in the current public consultation on proposals to improve the A27 through a new Arundel Bypass.

Pulborough Parish Council has decided to support the Magenta Route (Option 4/5AV1) as its preferred option. Please include this letter as the formal response from Pulborough Parish Council.

Yours faithfully



Clerk to Pulborough Parish Council



Description

---Stop the devastation of our wildlife!

The latest State of Nature Report 2019 shows that UK's wildlife is continuing to decline with an average loss of 13% in abundance across all wildlife species studied. Wildlife in our county and across the country is protected in various habitats on Nature Reserves maintained by the Sussex Wildlife Trust and other wildlife Trusts.

Highways England is planning to spend up to £250 million on six different options for an A27 Arundel Bypass. All six options will destroy and separate precious Sussex habitats including rare chalk streams and irreplaceable ancient woodland. This amazing area is home to rapidly declining bat species of which 14 will be threatened along with much more rare and protected wildlife.

I believe, along with the Sussex Wildlife Trust, that all six options:

- Will significantly and permanently sever our natural environment having an outrageous impact on wildlife and the landscape
- Will increase carbon emissions and make it much harder to meet the legal target of net-zero carbon by 2050
- Will harm the South Downs National Park
- Favour dual carriageways rather than an option for wide single carriageways that minimise impacts on precious ancient woodland

Surely the more sensible idea would be to spend money on an alternative route which would be less damaging for our wildlife and the countryside in which it lives and could still solve the current bottlenecks. Maybe wide single carriageway suggestions near the blackspots.

Only 9% of Sussex Ancient Woodland remain as does only 5% of flower rich meadows, and ancient woodland is threatened by this scheme. The wildlife and habitats of our county must not be under threat of even more fragmentation as this is the first step towards even more lost species when our planet's wildlife is so badly threatened by overpopulation and global warming.

All this rather makes a joke of Sussex having the newly bestowed title of "The South Downs National Park."

It is a well known fact that new bypass roads when built become congested with more traffic within a very short time and, with the UK trying to cut out carbon emissions within a few years (2050), surely new carriageways will only make this target impossible to achieve.

Surely spending this vast amount of money to solve bottlenecks, with wide single lanes carriageways where needed, would be a much more sensible and environmentally friendly way to solve Arundel's problems without destroying our ancient woodlands.

Let us all get behind the Sussex Wildlife Trust and fight this destructive idea for more dual carriageways for our small county. Please join the Sussex Wildlife Trust. (I have been a member from day one in the 60s). They are the largest Sussex organisation fighting to protect our wonderful county and, with all of us behind them, it can only help our county of Sussex to remain the green and pleasant land that we know. To find out more about Highways England's destructive plans go to sussexwildlifetrust.org.uk/A27Arundel.





Thu 26/09/2019 11:02

Arundel Bypass.



To: A27 Arundel Bypass



Greetings,

Please consider our preference for the long awaited A27 improvement including the Arundel Bypass.

Our preferred option is the 'Magenta' route. As you will be aware the need for this development is long overdue, we hope that you will also ensure that the access routes to and from the A27 will be sufficient to enable local businesses to gain the advantage from the development.

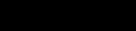
Regards,



Chairman

T:

STORAGE - HANDLING - TRANSPORT - LOGISTICS



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South Downs
Local Access Forum

To: Highways England
By email: A27ArundelBypass@highwaysengland.co.uk
Cc: SDLAF Members

Date: 23 October 2019

Subject: A27 Arundel Bypass Non –Statutory Consultation

This letter constitutes advice from the South Downs Local Access Forum. The South Downs Local Access Forum (SDLAF) is the statutory forum for the South Downs National Park under the Countryside and Rights of Way Act 2000. SDLAF is an independent body which aims to give balanced advice about countryside access based on the wide range of views of its members who represent farmers, landowners, user groups, conservationists and those with disabilities. The highways authority is required in accordance with section 94(5) of the Countryside and Rights of Way Act 2000 to have regard to relevant advice from this forum in carrying out its functions.

SDLAF's Terms of Reference include regard to the purposes and duty of the South Downs National Park Authority, in particular:

- To promote opportunities for the understanding and enjoyment of the special qualities of the Park by the public.
- Seek to foster the economic and social well-being of the communities living within the National Park

The SDLAF Reference Area is “The South Downs National Park, and areas adjacent to the SDNP with issues which will impact it.”

At its meeting on 23 October the South Downs Local Access Forum discussed Highways England's latest proposals for the A27 Bypass at Arundel.

Rights of Way and Access Impacts:

SDLAF members are aware of the traffic congestion issues around Arundel and also the historic severance to the rights of way network caused by earlier road improvement schemes. It is acknowledged that the effect of both the existing A27 and the volume of traffic on it and the associated road network has been to suppress levels of walking, horse riding and cycling as rights of way have been severed by the dual carriageway with no safe crossing points provided for users. Disappointingly, Highway England's current consultation seems to conclude that there is little to be done to promote greater use of these modes through the new scheme proposals. Indeed, it is disappointing to note that scheme consultation documents conclude that all options will *have moderate adverse on permanent road and public right of way diversions or closures which result in changes in journey length or severance.*

The SDLAF noted that all six of the proposed route options will impact rights of way (ROW) and in many cases diversions will be required. Whilst the details of the proposed diversions may require greater examination at a later stage in the process, the SDLAF seek to draw attention to the statutory criteria for diverting public rights of way:

The tests laid out within section 119 of the Highways Act 1980 are:

“That the termination point of the path or way should be as substantially as convenient to the public as the existing point.

That the path or way will not be substantially less convenient to the public.

That it is expedient to confirm the order having regard to the effect the diversion would have on public enjoyment of the path or way as a whole”.

The level of detail provided at this stage in the consultation is not sufficient to enable the SDLAF to provide detailed comments on the treatment of specific public rights of way for each of the route options. In general, the SDLAF would favour the provision of underpasses with sufficient headroom for walkers, equestrians and cyclists rather than lengthy diversions of existing routes.

The SDLAF considers that the least damaging options for the RoW network as presented are the mainly on-line routes which impact the fewest existing RoW routes, though considerable mitigation works would still be needed to address both historical and any new severance/connectivity issues.

Public Transport Impacts

The use of public transport by visitors to this area (and the benefits that they bring to the National Park and to local communities) should not be underestimated. This area is part of the National Park where many visitors arrive by train and may then use local buses as part of a visit to walk in the countryside, or to visit a public house or other local attraction. The importance of Arundel and Ford Stations as part of the journey to education or employment for local residents must also be appreciated.

The SDLAF is concerned that this consultation appears to have dismissed both the role public transport might play in reducing vehicle congestion in and around Arundel, and the need for provision of facilities to connect users with public transport, including the provision of non-motorised user routes to the rail stations and provision of bus stops on the A27 itself. The SDLAF has seen instances of bus stops removed from public use on busy A roads where, due to traffic speeds, bus operators have withdrawn services. We would therefore urge Highways England to consider how all route options may accommodate public transport now and in the future. As the consultation documents conclude that public transport at current levels would be unlikely to make an effective contribution to future travel needs, the SDLAF request that Highways England take a more holistic approach to addressing travel demand in the area by providing support for new bus routes and services, including express services that could contribute to reducing traffic congestion along the A27.

Final remarks

The SDLAF urges Highways England to ensure that, in selecting a preferred option, the access needs of all users are given due consideration:

- Accessibility for all modes of travel must be addressed – not just motorised vehicle users.
- Accessibility for all users must be addressed – in accordance with the requirements of the Equalities Act.
- Opportunities to upgrade public footpaths to bridleways enabling access for a greater range of users must be examined.
- Historic issues of rights of way severance on the existing A27 should be mitigated e.g., through the provision of bridges and underpasses.

- Connectivity between settlements and transport hubs should be enabled through the creation of new or improved routes for Non-Motorised-Users.

Yours sincerely



Chair of the South Downs Local Access Forum

[REDACTED]
A27 Arundel Project Manager
Highways England
Bridge House
1 Walnut Tree Close
Guildford Surrey GU1 4LZ

24th October 2019

Dear [REDACTED]

A27 Arundel Improvement Scheme Consultation response

I am writing on behalf of the South Downs National Park Authority with the SDNPA response to the consultation for the six schemes that have been proposed.

The Authority considered the schemes at its meeting on 1st October 2019

The SDNPA considers that the conditions of the withdrawal of the Judicial Review have been met, with the new options brought forward all being worked up to the same extent and including a route outside of the NP, but wishes to register a holding objection to the proposals on the basis that;

- As presented, all the routes, including the route outside the SDNP (grey route), impact negatively on the SDNP and its setting. To varying degrees all would cause significant harm to the biodiversity, cultural heritage, access, recreation potential and landscape character of the SDNP
- In the absence of both a detailed scheme plan that includes funded proposals for mitigation and any necessary compensation, it is not currently possible to rank the options in terms of their impacts on the SDNP.
- SDNPA urge Highways England to address, as a priority, the shared concerns raised in the Single Voice letter sent by the DEFRA family, which i) highlighted the issues of an embankment as compared with a viaduct – which conflict with HE assessments – ii) the issue of connectivity and also iii) the issue of environmental net gain

The Appendix gives more detail on why it was not considered possible to rank the routes. In summary, the mainly on-line Cyan and Beige routes, though potentially the least damaging for most of the Special Qualities of the SDNP, would have very significant unmitigated/compensated impacts on Ancient Semi Natural Woodland, and the townscape. By contrast the Crimson, Magenta, Amber and Grey routes – although they lie mainly or wholly outside the SDNP – still have significant impacts on the SDNP special qualities and would have major impacts on its setting.

The SDNPA stands ready to continue working with HE to find common ground as s HE consider their choice for the preferred route in early 2020,

Yours

[REDACTED]
Chair
South Downs National Park Authority

South Downs Centre, North Street,
Midhurst, West Sussex, GU29 9DH

[REDACTED]
www.southdowns.gov.uk

Appendix I
Appendix II Single Voice Letter



Appendix I

SDNPA Comments on the Impacts on the Special Qualities

Access

- Although one of HEs scheme objectives is to improve accessibility for all users, it is noted that HEs own assessment is that all the schemes would have a negative impact. So far as we are aware no assessment has been made on the effects on non-motorised users. This should be addressed.
- We can see no evidence that opportunities have been taken to address historic issues of severance on the A27 caused by previous schemes, nor to upgrade existing rights of way to enable more use by a greater range of users
- As presented, the (mainly on-line) schemes, cyan and beige are considered to be the least impactful on rights of way as they have the fewest additional severances and diversions

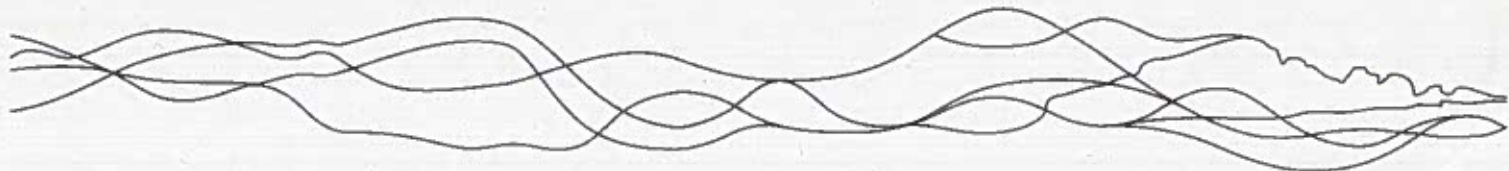
Cultural Heritage

- It is recognised that designated and non-designated heritage assets will be impacted by any road scheme and may be destroyed.
- A Preservation by Record process should include a high quality, robust, well-designed and considered archaeological mitigation and heritage strategy, which takes into account:
 - Consideration of research outputs such as the South East Research Framework for Archaeology, delivering where practical on its priority research areas.
 - Post-project archiving – provision and investment in infrastructure given the scale of finds likely to be produced by Preservation by Record.
 - Public engagement – both through the archaeological mitigation process and post-project.
 - Enhancement of remaining heritage assets in situ

Biodiversity

Trees and Woodland

- There is a lack of clarity over the extent of the scheme footprint. Since for all options the DCO could be as much as 400m wide, clarification is necessary to make proper estimates of the loss of woodland and individual trees
- As presented, the Crimson route would have a significant adverse detrimental impact on the entire ancient woodland network in this part of the National Park, and is the most damaging of all options
- The Cyan and Beige routes have the second highest impact on overall woodland loss after the Crimson route.
- The Amber route would have many of the same adverse impacts as the Magenta route, but with even greater direct loss of ancient woodland and woodland overall, veteran trees, loss of wood pasture and parkland and even greater adverse impact on bats, including the rare *Barbastelle* and *Alcathoe*, which is *newly discovered breeding in the UK at this location*
- As presented, the Magenta route results in less direct loss of ancient woodland, but still causes significant harm to the National Park and species that rely on these irreplaceable habitats, including veteran trees
- The Grey route, though outside the National Park, is only around 300m from the main block of ancient woodland, and will still cause harm by causing permanent severance of all of the north south green corridors (hedges and veteran trees) that are used extensively by the species whose habitat is the ancient woodland, particularly bats and dormice. This option also has the second highest impact on veteran trees



Other biodiversity comments not covered

- The impact on river habitats has been undervalued and is in conflict with HE assessment in the Water chapter
- Overall species impacts will be least along the existing road alignment (largely Cyan and Beige) as disturbance and connectivity are already present
- The assessment of impact on water voles is flawed as it relies on relocation in an area where there is an existing population

Water

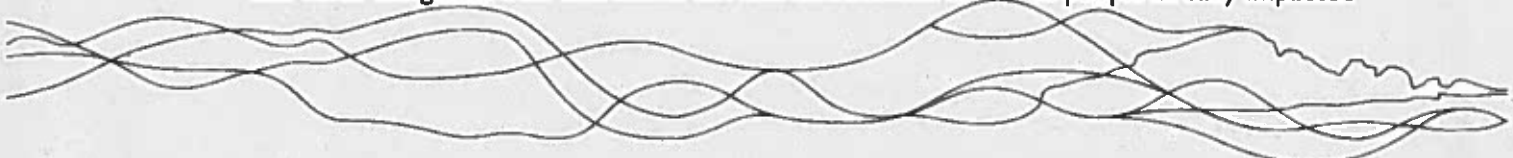
- Impacts on groundwater have not been fully assessed
- The need for floodplain mitigation on the offline schemes (Crimson, Magenta, Amber and Grey) has been greatly underestimated.
- There are no assessments made for the risks of tidal flooding
- The Cyan and Beige options are considered the least damaging to the water environment
- The impact of silt and construction run off on the chalk stream rifles has been underestimated.

Carbon

- There has been no assessment of the current carbon budget of the A27 as is, nor for the net impacts of carbon emissions from the various options. This is imperative given the scale of woodland loss and the drive for carbon net zero by 2050

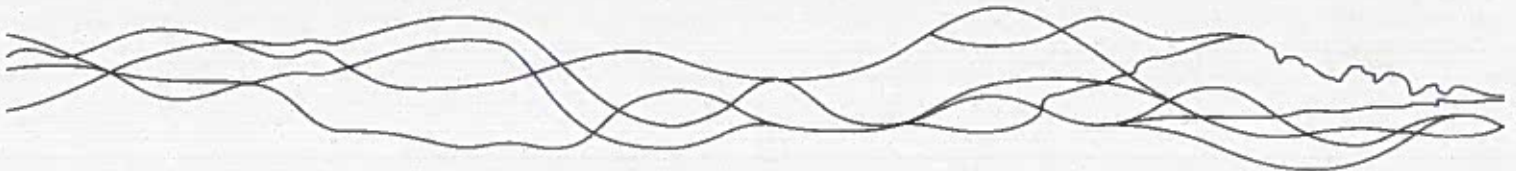
Landscape

- The interconnected network of habitats, landscape types, cultural heritage and aquatic environment inside and within the setting of the SDNP is quite exceptional and noted as a vulnerable key feature in its own right.
- All options require a modern dual carriageway structure to cross the Arun river floodplain within the setting of the SDNP, and the views and landscape character from both within and beyond the boundary of the SDNP would be detrimentally affected and severed to a significant degree
- The raised carriageway across the river flood plain would introduce vehicular movement, noise and visual intrusion into a currently tranquil landscape over up to 2km, and would incur the loss of distinctive historic landscape character features – Sussex medieval 'Innings' or water meadows amongst others
- The Defra single voice letter advocates for the benefits of a viaduct over the impacts of an embankment across the river valley. However, it is important to note that the ability of a viaduct to moderate these impacts (noted above) would depend on how it is designed
- The assessment process has not been informed by a local landscape assessment as recommended by best practice (GLVIA). Despite being a highly sensitive landscape, the upper coastal plain has not been appropriately assessed
- The duration and extent of views has not been assessed in the report. This is considered to be a significant omission
- As presented the Cyan and Beige options have marginally less landscape and visual impact due to the existing baseline being compromised by the presence of the existing road. However, from a townscape perspective, the current designs for Cyan and Beige routes appear to be highly intrusive in the setting of the SDNP and to the town itself. Given the reduced costs of these route options compared with the offline routes there would appear to be some headroom to improve the design of these proposals through design mitigation and other mitigation over and above the current situation for those people already impacted



Dark Night Skies

- General principle would be to use mainly existing route (Cyan or Beige) to maintain sky quality levels and not introduce 'additional' lighting sources which could reduce darkness and have further landscape impact
- Lighting design should have regard for DNS as required in BS 5489-1:2013 Section 4.3.5 (Code for practice for the design of road lighting).
- Lighting should only be installed provided there are clear safety concerns. Automatic presumption of lighting on carriageway should not be considered
- Lighting should comply with ILP installations for E1a zone as minimum. E0 should be sought (which requires use of part night lighting schemes)
- Maximum Colour Temp of **3000K** should be used as to minimize white light penetration and comply with IDA guidelines for IDSR Reserve. (This could be an enhancement for the area)



Appendix 11



13th August 2019

Dear Highways England

A27 Arundel Bypass - Defra single voice letter

The proposed options for the A27 Arundel Bypass are all located in a landscape and environment of national importance which is within, or in the setting of, the South Downs National Park.

The Environment Agency, Forestry Commission, Natural England and South Downs National Park Authority have worked jointly to provide a single voice position on a range of key issues identified at this stage. This letter provides you with the principles that we would wish to see taken forward through the next consultation and as the scheme progresses.

As an overarching principle we have advised that any option for the bypass should be considered in an integrated way at a landscape scale. This will ensure that impacts on a complex and interconnected ecosystem, set within a wider hydrological catchment, are fully understood alongside any impacts on the historic landscape.

We have identified that the scale and nature of this scheme in this significant location requires a bespoke approach.

Specifically we are all in agreement that the following considerations should be taken forward by Highways England:

Severance:

The options presented introduce the permanent and significantly harmful severance of this sensitive landscape, cultural heritage and its biodiversity. We have advised that a scheme of this nature in this landscape will require a tailored approach to mitigation.

It is essential that landscape, biodiversity, hydrology and cultural heritage are considered together in an environmental masterplan in order to appropriately address severance and resilience and to avoid the potential for addressing one issue to the detriment of another (see below)¹. We recommend that a body or consultancy is appointed to undertake this specific high level and visioning role as a priority. We have advised that the Natural Capital assets of the area must be included in the assessment.

¹ <https://www.gov.uk/government/publications/the-road-to-good-design-highways-englands-design-vision-and-principles>

We have advised that in order to provide a sufficiently robust level of assessment that the scheme clearly follows the mitigation hierarchy, evaluates each option with reference to this and adopts a landscape-scale of assessment. This is necessary in order to appropriately consider severance and resilience within this special landscape.

The scheme contains a notable assemblage of irreplaceable and priority habitats with associated rare and protected species, including all three Annex II species of bat. The presence of these species indicates the quality of this area and the permeability of the landscape

It is clear that severance in this location is of particular concern, the effects of which are most profound in the offline options. Severance must be considered in terms of functionality of this landscape, and its biodiversity within all habitats affected. Assessments must include the severance of species such as bats from roosting and feeding areas and on habitats such as ancient woodland affecting their resilience and ability of habitats and species to adapt to climate change.

The use of multiple quality green bridges in optimal locations will be a minimum requirement for each option.

Consideration of a Viaduct crossing of the River Arun Floodplain:

It is expected that all options presented will cross the River Arun and to date are being considered through the use of embankments. We all consider that an embankment would have serious and significant negative impacts on hydrology, biodiversity, landscape and cultural heritage.

We have advised that both the impact of introducing an embankment into the floodplain, and the costs associated with compensatory flood storage and habitat creation will be considerable.

An embankment will permanently sever the floodplain, reduce connectivity of wetland habitats and associated species and change the way that the river and floodplain interact. It would also sever Arundel from its valley with associated significant landscape and cultural heritage impacts.

Introducing a structure across the River Arun floodplain in this historic landscape would clearly have several impacts. We have advised that a viaduct would be far more permeable for wildlife, water and people.

We urge Highways England to consider a viaduct in place of an embankment.

Environmental Net Gain:

We would advise you that in line with your organisation's own targets and license to operate, and in recognition of the particular significance of this area, that any scheme demonstrates a clear ability to deliver considerable net gain.

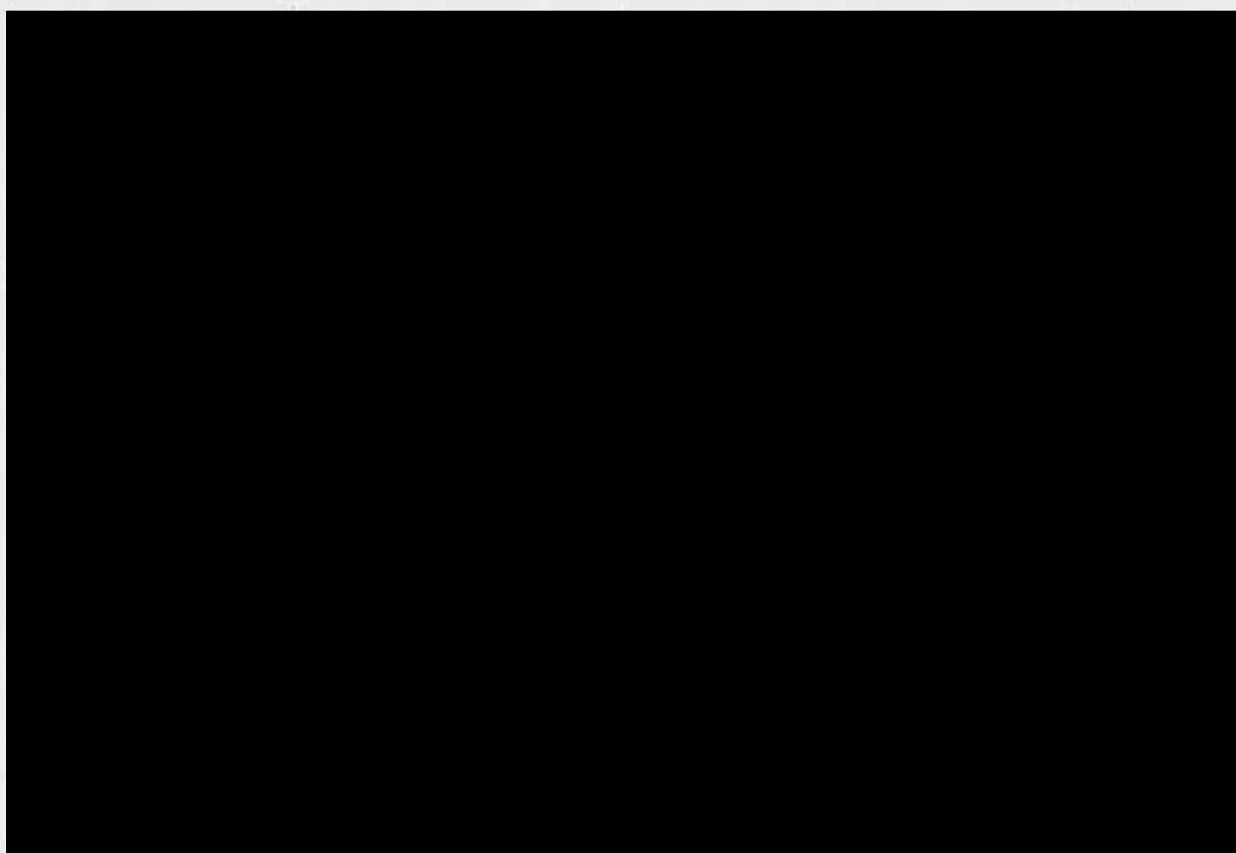
We would wish to see any scheme seek to provide a betterment from the existing baseline. Notably we have advised that we would wish to see improved connectivity of habitats across the existing A27 route.

It is our belief that through adopting a wider landscape scale approach and ensuring the key principles detailed above are taken forward you will be able to meet your own objectives for this complex scheme. We advise that due to the nature and location of this scheme it is imperative that you deliver an exemplar road scheme in line with the aspirations of the Road Investment Strategy to deliver schemes that will be “trail-blazers for the future”².

Please note this letter provides our collective view on key issues where we have shared responsibilities and interest.

The contents of this letter are given without prejudice to any further responses individual signatory organisations may provide on the breadth of their remits in the future.

Yours sincerely,



² <https://www.gov.uk/government/speeches/beautiful-roads>



South Downs National Park Authority Meeting
1 October 2019

Agenda Item 7

Response to Highways England re. A27 Arundel

Report NPA19/20-11 and Appendices



South Downs
National Park Authority

Agenda Item 7
Report NPA19/20-11

Report to	South Downs National Park Authority
Date	1 October 2019
By	Countryside and Policy Manager (Wealden Heaths)
Title of Report Decision	A27 Non-statutory consultation for Highways England options at Arundel

Recommendation: The Authority is recommended to:

- 1. Note the contents of the report**
- 2. Delegate authority to the Director of Countryside and Policy Management, in consultation with the Chair of the Authority, to draft a holding objection response as the Authority's response to the non-statutory consultation.**
- 3. Agree the key issues to be covered in the response, including:**
 - That all the route options as currently presented, including the route outside the National Park (Grey Route 5BVI), impact negatively on the National Park and its setting. To varying degrees all would cause significant harm to the biodiversity, cultural heritage, access, recreation potential and landscape character and visual quality of the South Downs National Park.**
 - That Highways England should be urged to address, as a priority, the shared concerns raised in the Single Voice letter sent by the DEFRA family.**
 - That in the absence of both a detailed scheme plan, and a committed and funded mitigation and compensation package, it is not currently possible to rank the options in terms of their impacts upon the National Park.**

1. Introduction

- 1.1** Highways England (HE) is the government company charged with operating, maintaining and improving England's motorways and major A roads. Formerly the Highways Agency, it became a government company in April 2015.
- 1.2** As part of the Road Investment Strategy period 1 (2015 – 2020) HE identified possible schemes throughout England where they considered intervention necessary to improve the strategic road network. The A27 at Arundel was one such scheme.
- 1.3** HE brought their original proposals forward in an initial non-statutory public consultation for the project between August and October 2017, to seek views on three options to improve the A27 at Arundel. SDNPA responded that *'..all three schemes as presented have the potential to cause severe adverse impacts on the natural beauty and recreational potential of the National Park'* (SDNPA response to HE Consultation – Oct 2017).
- 1.4** HE subsequently published a preferred route most of which lay inside the National Park. This decision was subject to Judicial Review by the SDNPA on the basis of HE having

excluded from the consultation a route outside the boundary purely on cost grounds (Oct 17). In response, HE undertook to pay SDNPA costs, and to present a fresh set of options, including a route wholly outside the National Park, all to the same level of detail. The JR was therefore withdrawn. It is these revised options that HE are now seeking comments on.

1.5 HE have put forward six new options for consultation: two largely online and four others, one of which lies entirely outside the National Park boundary but would have impacts upon its setting. See Appendix 1 for a plan of the scheme routes and names.

1.6 Members have previously taken part in site visits and workshops and have received presentations from HE and SDNPA officers. Papers have been taken to P&R Committee and the NPA on a number of occasions from July 2014, culminating in a joint HE/SDNPA presentation/workshop in Sept 2019, outlined in 'Arundel A27 SDNPA Timeline' Appendix 2.

2. Policy Context

2.1 Members have previously agreed the approach to be taken by the SDNPA in responding to schemes (see Appendix 3), and officers have consistently used this to shape their comments and recommendations on the Arundel proposals.

2.2 **All the routes, as currently presented would have impacts, to varying degrees, on the seven special qualities of the National Park and therefore the desired outcomes in the new Partnership Management Plan as ratified by the July NPA.**

3. Issues for consideration

3.1 The purpose of the scheme sets the parameters of what the public are being consulted on and what HE are required to work up, as set out by the Government in its Road Investment Strategy 2015-2020 as follows: to replace *"the existing single carriageway road with a dual carriageway bypass, linking together the 2 existing dual carriageway sections of the road"*. This statement rules out any single carriageway options.

3.2 A condition of the withdrawal of the JR was that HE run a fresh consultation with all options (including at least one route wholly outside the National park) worked up to the same level of detail. This has been done.

3.3 Based on discussions between HE and members of the DEFRA family (Forestry Commission, Natural England, Environment Agency and the SDNPA), a 'Single Voice' letter, setting out issues of shared concern common concerns for the scheme (Appendix 4) was sent in August 2019. To date there has been no detailed response to the issues raised in this letter.

3.4 The DEFRA family's shared concerns are set out below. (Nb. The SDNPA has other issues and these are covered later in the paper):

- That an embankment would have serious and significant negative impacts on hydrology, biodiversity, landscape and cultural heritage, and the costs associated with compensatory flood storage and habitat creation will be considerable. A viaduct would be preferable;
- That the degree of severance, for people and wildlife, will require significant and bespoke mitigation set within an environmental master plan;
- The need to achieve Environmental Net Gain, based on the HE license to operate and its own targets.

3.5 Although much work has been done by HE, there are as yet no detailed drawings for each route option. This makes it impossible to be clear about the impacts of each and the extent to which the potential mitigations (or compensation) suggested might be adequate, and hence rules out at this stage any ranking in terms of the relative net impact upon the National Park.

3.6 Only the two (mainly) on-line options sit within the available funding envelope. No other money is guaranteed, but there is an assumption by the HE team that it will bid internally for additional money from the HE Designated Funds. It should be noted that these bids are

competitive with other schemes across England, so funding for mitigation or compensation cannot be guaranteed.

- 3.7 The base business case for Arundel is predicated on the assumption that the A27 scheme at Worthing and Lancing will go-ahead, though at present this has been mothballed by the DfT due to lack of local support. HE have also calculated the benefits/cost ratios for the Arundel options assuming no Worthing Lancing scheme, this version shows all Arundel options are as low value for money but with the on-line routes and option 3 as the best performing. (Interim Scheme Assessment Report (ISAR) Chapter 10 Summary Economic Appraisal table 10-12).
- 3.8 Although HE include some mitigation in the cost of each option, they have been unable to share any specific details. This makes it very difficult to reach any conclusions about their adequacy or appropriateness, and the licensing authorities (Natural England, Forestry Commission and Environment Agency) have not as yet given any approvals for mitigation or compensation.
- 3.9 With only the (largely) on-line routes being described as within the funding envelope, and no certainty over any additional funding from Designated Funds for any of the mitigations proposed, caution has been exercised when considering the options.

4. Impacts on Special Qualities

Landscape

- 4.1 **Due to the overriding highly significant harm to the landscape character and visual quality of the SDNP and its setting which is likely to be caused by all route options presented, and the lack of detailed scheme drawings and agreed mitigation/compensation plans none of the options can be supported on landscape grounds.**
- 4.2 All options require a modern dual carriageway structure to cross the Arun river floodplain to the south of Arundel. This would impact views and landscape character from both within and beyond the boundary of the National Park to a highly significant degree.
- 4.3 The introduction of a raised dual carriageway across the flood plain would introduce vehicular movement, noise and visual intrusion into a still and tranquil landscape on a significant scale (up to 2km). It would also incur the loss of distinctive historic landscape character features including Sussex medieval 'Innings' or water meadows.
- 4.4 All offline options pass through the intricate and aged landscape of the upper coastal plain. The landscape here is particularly intimate, undulating and of a small scale with features rich in time depth and antiquity, and it is characteristically still and tranquil. These qualities would be severely impacted.

Setting of the National Park

- 4.5 The perceived setting in any one location around the protected landscape depends on many environmental factors rather than a set distance from the boundary, for example :
- Consistent landscape character types across the boundary;
 - Ecological networks which extend into and out of the protected landscape
 - Cultural heritage associations which extend beyond the boundary;
 - Water and the aquatic environment connectivity beyond the boundary;
 - Inter-visibility between the protected landscape and landscape outside the boundary (where this occurs it is often referred to as 'borrowed landscape');
 - Access routes from the hinterland to the National Park
- 4.6 The above factors have created an exceptional landscape of national/international importance. This highly unusual grouping of features in and around the boundary of the

National Park at Arundel should be included in the baseline and noted as a vulnerable key feature in its own right. This is not currently demonstrated in the assessment.

Embankment versus viaduct

- 4.7 The ability of a viaduct to moderate these impacts (noted above) would depend on how it is designed to respond to the iconic status of the existing landscape. This issue is not explored in the HE assessment. (To note, the viaduct options as shown in the fly through films do not appear to enhance the landscape).
- 4.8 Chapter 8 para 8.13.1.3 in the Scheme Assessment Report assesses the comparable environmental impacts of a viaduct versus an embankment and concludes that there is no difference. This is at odds with the view of the Defra family (see above)

Landscape character

- 4.9 The route options are all within a landscape of significant variety – including the chalk ridge, the river valley, the river flood plain, the upper coastal plain and the coastal plain itself. The Guidelines for Landscape and Visual Impact Assessment 2013 (GLVIA) recommend that where there is an inconsistent coverage the assessor should undertake a local character assessment in order give a consistent approach. HE have not followed this recommendation for the study area (which is located on the interface between the West Sussex County Council Landscape Character Assessment and the South Downs Integrated Character Assessment 2011). The boundary of the National Park, and the importance of the upper coastal plain local character area in the designation process, requires more detailed consideration. This will probably reveal a higher level of both sensitivity and harm to the upper coastal plain character.

Visual Baseline

- 4.10 The views and visibility in this series of landscapes owe much to the unique assemblage of geographical features – the Downs, river valley & valley sides, flood plain, upper coastal plain and the coastal plain. These are the basis for cultural and natural features – for example Arundel Castle, the cathedral, the town itself, historic routeways, Tortington Priory, ancient woodland and veteran trees, streams and small valleys. These in turn make up parts of, and benefit from, both extensive and intimate views. It is suggested that the overall visual quality of this assemblage of features and views has not been given sufficient weighting in the assessment.

Duration of Views in the visual assessment

- 4.11 In the Environmental Assessment Report (EAR) Chapter 7 ‘Landscape and visual quality’ the duration of representative views is neither assessed nor mapped. In accordance with the GLVIA, the routes should be assessed in the context of how they would be experienced in the landscape, not on snapshots which do not take into account the spatial and time element of that experience.

Screening by Ancient woodland

- 4.12 In the assessment the restricted visibility of sections of the road within ancient woodland is taken to reduce their visual sensitivity of these sections. This approach attaches no value to the impact on the visual quality of the woodland itself. The contribution that views of the woodland make to the appreciation of natural beauty in the context of the National Park designation is also omitted. The visual harm to the woodland features – trees, understorey and loss of features - would be significant, as would the creation of an unnatural and severed woodland edge.

Ford Road Junction

- 4.13 ISAR chapter 8, para 8.4.1.4 draws attention to a possible additional junction on the proposed A27 south of Arundel on the offline routes, with Ford Road shown as an underpass. This has come from the earlier consultation responses from stakeholders but no details are included, and in 8.4.1.5 it is stated that it would not create additional impacts.

However, it seems likely that the size, scale and positioning of the additional structures required to achieve a grade separated junction would have significant impact.

Detrunking

- 4.14 In ISAR chapter 8, para 8.9.1.4 it states that all options would include additional features within the de trunked section of the existing A27, subject to an application for designated funds. Even if de-trunked, the road will still carry local traffic and as a result the overall impacts of the de-trunked route and the new route would occur over a larger area within and in the setting of the National Park. For example an offline option would result in two road crossings for users of the Rights of Way network rather than one (the existing A27).

Temporary landtake

- 4.15 The extent of land take required for construction has not been identified. Section 8.18.2 of the ISAR states that the construction of the embankment would require temporary haul roads beyond the embankment footprint (estimated at approximately 60m width). In addition, significant areas would be required for soil, fill and topsoil storage along each route. Clearance of these areas prior to construction would contribute further to the loss of characteristic features in the landscape.

Mitigation and compensation for online route options

- 4.16 The online route options have lower environmental impact due to them being based in part on the existing road. However from a townscape perspective the current designs for IV9 & IV5 are highly intrusive. Given the reduced base costs of these route options compared with the offline routes, there would appear to be headroom for an enhanced package of mitigation.

Value Engineering

- 4.17 In ISAR Chapter 8 section 8.19.1 the potential to value engineer the scheme is considered and it is in this section that the reality of the budget constraints of the scheme are set out. All of the options apart from the online routes are already significantly over budget as presented, yet are likely to require significant additional mitigation and compensation.
- 4.18 Options such as reducing the footprint of the embankment by using 1:2 slopes rather than 1:3 could have negative effects on the management and maintenance of vegetation and add to visual disruption within the flood plain. Other value engineering proposals include one to reduce the number of bridges for Rights of Way users by collecting the routes into one crossing. This would mean redirecting sections of existing RoW alongside the new road to reach a crossing point.

Drainage

- 4.19 The approach to drainage is set out In the ISAR Chapter 8 para 8.15.1.1 mentions outfalls to attenuation basins, and the potential to create wetland habitat to provide water treatment. However, there is no certainty about this.

Lighting

- 4.20 **Given the options, and in the absence of a lighting plan it is the preference for schemes that either reduce or maintain the same level of lighting and light pollution.**
- 4.21 There are areas of important dark skies along the route already which will be impacted by any of the schemes
- 4.22 Options to the south of Arundel which require new roads (4/5AV2, 5BV1, 4/5A1, 3V1) - while moving the sources of pollution further away from the dark skies - will in principle introduce new sources of light pollution whilst maintaining existing ones.
- 4.23 Of the options that partly use the existing routes (IV9, IV5) it is preferable to favour the option with the least amount of infrastructure requiring lighting.

- 4.24 For general lighting preferences principles;
- Lighting should point downwards so that the upward light ratio is zero. This is fairly standard these days, so easily implementable.
 - Signage along routes should be non-illuminated unless there is a clear safety case.
 - Part night light schemes should be explored with any option.

Biodiversity

- 4.25 **The HE Ecological Report concludes that, even after mitigation, all options are likely to have a significant adverse effect on Binsted Wood Complex Local Wildlife Site. In addition, Options IV5, IV9 and 3VI would affect the Rewell Wood Complex Local Wildlife Site.**
- 4.26 There are likely to be significant adverse effects on the structure and function of other priority habitats ancient woodland, wood pasture and parkland, deciduous woodland HPI. Option 3VI would have a very large impact on these habitats.
- 4.27 In terms of ancient or veteran trees occurring outside of ancient woodland, a very large adverse impact is predicted for all options other than Option 3VI (which is largely in ancient woodland).
- 4.28 Option 4/5AVI will result in direct loss of traditional orchard HPI which is assumed to be a high quality example of this habitat which may be difficult to recreate or restore.
- 4.29 All scheme options will result in the loss of coastal and floodplain grazing marsh HPI (HPI is an arbitrary wider habitat type classification given by NE) including ditches supporting notable aquatic plants or areas of lowland fen HPI, reed bed HPI and marshy grassland.
- 4.30 All options are likely to have a significant adverse impact on the river HPI, by creating new structures across the Arun and the two Rife streams which will form barriers to some species and cause significant direct or indirect detrimental harm to irreplaceable habitats of national significance
- 4.31 Construction and operation is likely to have a number of significant adverse effects on the conservation status of internationally significant bat species and Hazel dormice. In addition, construction will result in the loss of burrowing and foraging habitat for water voles and no assessment of the existing populations in the area has been made. It is not possible to mitigate by relocating a species to habitat that is already occupied
- 4.32 Impacts on trees, woodland and hedgerows for all options will result in a net loss in canopy, and a net environmental gain will not be possible, even with mitigation and a detailed compensatory plan.
- 4.33 Due to the scale of adverse impacts on trees and woodlands, and the lack of detail on mitigation and compensation it is not possible to make a final assessment of the relative impact of each option.
- 4.34 Overall, this is an area with exceptional landscape and biodiversity value. In particular, the quality, extent and interconnected nature of veteran trees, hedges and woodlands affected by the options, a large proportion of which are irreplaceable, mean the cumulative impacts are likely to be of national significance.

Trees, woodland and hedgerows

- 4.35 Option 3VI is shown as creating the greatest loss of woodland and would have severe impact on the ancient woodland network in this part of the National Park. The direct loss of ancient woodland would be 16ha over 3 miles. (By comparison HS2 phase 1 is estimated to remove 29ha over 140 miles). In the 2017 consultation, the estimated loss of AW for this option was 24ha, and it is not clear what has changed about the development of this option to result in such a difference.

- 4.36 Online options (IV5 and IV9) would have significant adverse impact on veteran trees, loss of high value amenity trees that are most visible to the public, loss of the Arundel arboretum, large adverse impact on Rewell Wood LWS (habitat for the very rare Duke of Burgundy and Pearl Bordered Fritillary butterflies) and high loss of canopy cover.
- 4.37 Option 4/5VI results in less direct loss of ancient woodland, but causes indirect impacts of severance which, combined with the retention of the existing A27 route mean that this still causes significant harm, including to veteran trees and a fine example of a traditional orchard.
- 4.38 4/5V2 would have many of the same adverse impacts of VI, but with greater direct loss of ancient woodland, veteran trees, other woodland, wood pasture and parkland. It would also have greater impact on bat species including the rare Barbastelle and Alcahoie, which is newly discovered in the UK and is breeding at this location
- 4.39 Option 5BVI, though outside the National Park and the most remote from the main block of ancient woodland, will still cause harm by causing permanent severance of all of the north south green corridors (hedges and veteran trees) that are used extensively by mobile woodland species such as bats and dormice. This option also has the second highest impact on veteran trees, and would be in very close proximity to a traditional orchard at Tortington
- The direct loss/detrimental impact on Ancient Woodland outside of the built footprint for each option has not been calculated or assessed.
- 4.40 Detrimental impacts on Ancient Woodland would include, but not be limited to:
- fragmentation and severance of habitat, (for example, the southerly options 4/5AV1 and 2 5BVI all sever important north-south green corridors that are vital to 'feed' the expansive ancient woodland block to the north- effectively cutting it off from the south);
 - pollution- from construction and operational phase;
 - further loss and damage to AW trees due to operational issues eg, soil compaction and root severance;
 - increased number of collisions with animals, and increased wildlife mortality
- 4.41 Options will to varying degrees, have adverse impacts on a wide range of priority habitats and species and Local Wildlife Sites, including:
- Woodpasture and Parkland- IV5, IV9, 4/5AV2
 - Deciduous Woodland- all options
 - Traditional orchard- 4/5AV1 (also 5BVI and 4/5AV2 come very close to another in Tortington)
 - Badgers- 3VI, 4/5AV1 and 2, 5BVI
 - Bats- all
 - Woodland birds- all
 - Barn owl- all
 - Dormouse- all
 - Terrestrial invertebrates- all
 - Other notable mammals (e.g. Brown hare, hedgehog, harvest mouse)- 3VI, but also likely 4/5VI and V2, 5BVI
 - Binsted Wood LWS- all but 5BVI
 - Rewell Wood LWS- IV5, IV9, 3VI

4.42 Tree Preservation Orders (TPO) – It is noted that the following trees or groups of trees have TPOs on them. (It should be noted that not all qualifying trees in rural areas are routinely TPO'd due to the numbers involved)

- TPO individuals- IV5, IV9, 4/5AV1, 5BV1
- TPO Groups or Woodlands- all but 5BV1

Carbon budget

4.43 There has been no assessment of the carbon budget of the current A27, nor for the various options. The scale of woodland loss, and the consequent reduction in carbon sequestration makes assessing carbon budgets an important factor

Biodiversity Mitigation and Compensation

4.44 There is a lack of a detailed and costed mitigation plan. Only very outline mitigation measures have been suggested for the various receptors that will be adversely affected by all options with no firm commitments made. The measures indicated do not give confidence of a comprehensive, landscape scale approach, and the overall residual impacts range from adverse to very large adverse for all biodiversity receptors.

4.45 There is a lack of a compensatory strategy for the loss of irreplaceable habitats (i.e. Ancient Woodland and Veteran Trees) at this stage. It is suggested that this will follow at stage 3 (preferred route) which is too late in the process since the need for and cost of compensation for residual damage should be a factor in choosing this.

4.46 It is encouraging that efforts have been made by HE to quantify and aim for Environmental Net Gain, and this is to be encouraged and refined as an approach for all NSIPs. However, it is conceded by HE that opportunities for 'enhancement' will be 'challenging' overall due to the scale of loss of ancient woodland.

4.47 Extreme caution should be exercised in respect to compensatory measures for loss of ancient woodland. Measures such as translocation of soils, are at best a partial solution, and are a relatively new concept in the UK. Studies analysed by the Woodland Trust (Ryan, 2013) have shown that translocation of soils is not fully effective, and that it is not currently possible to translocate ancient woodlands.

4.48 **Concluding Biodiversity Comments.**

- **There are likely to be major residual impacts on designated sites, priority habitats and species even after mitigation measures.**
- **The impact on river habitats has been undervalued and is in conflict with the assessment in the water chapter.**
- **Options IV5 and IV9 widen the existing route corridor. This which will have an impact on Binsted and Rewell woods but this widening may be less damaging than new routes which would bisect undisturbed designated sites.**
- **Species impacts will be least along the existing road alignment as disturbance and connectivity are already present to some extent.**
- **The assessment of impact on water voles is flawed as it relies on relocation in an area where there is an existing population.**

Water

4.49 Options IV5 and IV9 have no impact on floodplain meadow ditches, Binsted and Tortington Rifes. The impact on groundwater will be negligible although there are potential impacts from ground water removal, or de-watering during construction, (which could impact on groundwater flows). Both schemes will improve attenuation of road run off through improved drainage, and reference is made to the CIRIA Sustainable Urban Drainage manual.

The impact on the River Arun is reduced compared to other options as the online routes utilise the existing crossing point.

- 4.50 In terms of flood risk, and despite the explanation put forward by HE, it is unclear as to why options IV5 and IV9 have been assessed as having a greater impact on the floodplain than any of the others and requiring more mitigation. Whilst there will be some impact along the current route between the railway and the Ford road, this is not in any way on the scale of the other routes. (Environmental Assessment Report Chapter 13 Road Drainage and water environment para 13.9.6.4 – 6.6).
- 4.51 It is understood that any agreed upstream mitigation flood storage areas should have all necessary planning permissions and be built before any structures are put into the floodplain, which is a challenge for all options in the timeframe, and particularly for an embankment option which requires a long period for settlement.
- 4.52 Option 3VI includes a new bridge across the Arun and a clear span over Tortington Rife. All other watercourses will be culverted, to maintain capacity of the channel. Two cuttings on this route could have an impact on groundwater flows, and this has not been assessed. Whilst the impact of the bridges on water courses has been considered the report does not appear to consider the impact of any road embankment upon the floodplain, rather it suggests that this route will require less mitigation than IV5 or IV9.
- 4.53 Options 4/5AV1, 4/5AV2 and 5BVI all follow similar routes across the Arun, all cross the Tortington Rife and Binsted Rife which are chalk streams and therefore priority habitats. The report identifies residual adverse risks of sediments entering the two Rife streams during construction but it is felt that these have been under-estimated. Once again these schemes have cuttings and the impacts on groundwater flow have not been assessed. Whilst the impact of the bridges on water courses has been considered, the report does not appear to consider the impact of any road embankment upon the floodplain, actually stating that this route will require less compensation than the IV routes.
- 4.54 For all options there is a risk of interruption to the connectivity of floodplain ditches which will impact on aquatic ecology, despite the use of culverts, as these can be a barrier to movement of some species. Options IV5 and IV9 are the least damaging as they have the least new land take.
- 4.55 **Concluding Water Comments.**
- **Options IV5 and IV9 are the least damaging to the water environment**
 - **The discussion relating to SUDS and the potential to improve existing road drainage is welcomed but clear proposals are needed**
 - **Impacts on groundwater have not been fully assessed**
 - **The need for floodplain mitigation on schemes 3VI, 4/5AV1, 4/5AV2 and 5BVI has been greatly underestimated.**
 - **The impact of silt and construction run off on the chalk stream rifes has been underestimated.**

Historic Environment

- 4.56 **The historic environment is an important aspect of the South Downs National Park, and as such is a fragile, finite and irreplaceable resource. It includes designated heritage assets and their settings, but national policy on NSIPs also requires non-designated heritage assets to be a core consideration. The historic environment may contain heritage assets which fall outside the current scope of the Scheduled Monument Act, but which are still recognised for their special**

status, or yet-to-be discovered sites which sit within areas of known archaeological potential as at Arundel.

- 4.57 Where archaeological investigation is required, for instance along the recently discovered and un-investigated Roman road near Scotland Lane a strategic commitment to meaningful and robust archaeological investigation with associated public engagement and access must be demonstrated. Heritage assets cannot be recreated - even moving a building to another site changes its environment and the historical connections to its original location.
- 4.58 A masterplan approach should look to avoid or minimise any harm to the historic environment and in doing so acknowledge that archaeological investigation is a destructive process in itself, only to be proposed as mitigation for unavoidable harm when other solutions have been exhausted.
- 4.59 Ancient woodland is valuable not only as a habitat but because it enshrines a specific experience of place, for example, by preserving ancient planting schemes, with trees used for waymarking and boundary marking at a time when literacy levels relied on physical landscape markers or images.
- 4.60 Given the known density and richness of heritage assets in the Arundel area there needs to be a more detailed level of assessment of archaeological impacts, and commitment to robust mitigation strategies.
- 4.61 Of particular importance is the need to recognise that the enhancement of heritage assets is a requirement alongside conservation, but there is minimal evidence of this enhancement approach in the current proposals.
- 4.62 Only with detailed assessment can the impact on known and potential heritage, both designated and undesignated, be assessed so that (in accordance with Historic England advice) there can be either mitigation by design (e.g. moving the alignment of the road, cuttings and associated works) or mitigation by record/inter-visibility of heritage sites/assets.
- 4.63 Mitigation should deliver more than a basic package of archaeological investigation - engagement with the public through archaeological processes that are well designed and considered will help to engage the public in questions about the historic environment, but also contemporary infrastructure needs. For example, the A27 Westhampnett Bypass in 1992 welcomed 4000 visitors in a single day of its public engagement events on site, and delivered outreach and engagement with archaeology through museums in the area.
- 4.64 Experience from HS2 shows that large-scale infrastructure projects generate large amounts of archaeological material that require long term storage and public access via museums. One large infrastructure project has the capacity to wipe out a museum's capacity to collect due to the scale of its impact on storage space and staff capacity, so early conversations should be held in order to understand whether extra capacity is needed.
- 4.65 More specifically, the Collections Discovery Centre at Fishbourne Roman Palace holds all archaeological finds for development projects delivered within Chichester District, and it is possible that additional capacity would be needed there.
- 4.66 A high quality, robust, well-designed and considered archaeological mitigation and heritage strategy is required, which takes into account:
- the South East Research Framework for Archaeology, delivering where practical on its priority research areas.
 - impacts on views and vistas of Arundel castle – including business impacts.
 - post-project archiving – provision and investment in infrastructure.
 - public engagement – both through the archaeological mitigation process and post-project.

- enhancement of remaining heritage assets in situ.
- 4.67 Given the archaeological potential of this area of the South Downs, an appropriate mitigation response should be preceded by:
- A programme of archaeological field-walking (to be timed around ploughing for autumn and spring within the project timetable).
 - Geo-archaeological assessment and sampling by a qualified geo-archaeologist to identify Palaeolithic deposits, and which delivers increased understanding of Palaeolithic remains and climate change. This could also deliver on landscape geological priorities by additionally delivering on walkover geological recording.
 - Geophysical surveys to further identify potential archaeological remains to be considered during trial trenching.
 - Trial trenching to an agreed percentage of the site.
- 4.68 The above approach can then inform the development of an appropriate archaeological mitigation strategy. In addition to a full archaeological investigation, the mitigation strategy should deliver:
- A final report and additional academic publication of archaeological investigation for the entire programme of works.
 - A programme of public engagement with any archaeological excavations and archaeological finds
 - Provision for the deposition of archaeological finds in a recognised archaeological archive repository.
 - Identified methods of providing enhancements to remaining historic environment assets (scheduled and non-scheduled).

Access

- 4.69 **The main headlines for Access are:**
- **Severance is made worse by all options**
 - **The options presented do not meet HE's scheme objectives in relation to 'all users'**
 - **The options have a negative impact on the Special Quality 5.**
 - **Opportunities to address and remedy historic issues of severance on rights of way have not been taken**
 - **Opportunities to upgrade public footpaths to bridleways enabling access for a greater range of users have been missed.**
 - **Insufficient detail is provided with regards to the proposed Rights of Way diversions.**
 - **A specific and significant example is the lack of information about provision for non-motorised users at the Crossbush junction, where we would expect to see a north-south link to the approved Lyminster bypass scheme.**
- 4.70 The Scheme Objective to *Improve accessibility for all users...* is measured by HE using the following criteria:
- Reduce highway severance effect for walking, cycling and horse riding
 - Improve multi-modal journey times to key services and facilities
- 4.71 However, the HE reports make it clear that severance will not be reduced and that no impact assessment has been made for journeys undertaken by non-car modes. The risks of

the scheme options further increasing severance of the National Park from coastal communities has not been specifically assessed.

- 4.72 HE's own assessment contained in ISAR Chapter 12 para 12.9.2.4 states: 'All options will "result in Moderate Adverse effects (significant) on users of permanent road and public rights of way (PROW) from diversions, closures, changes in journey amenity and permanent impacts on physical activity opportunities"
- 4.73 The opportunity to provide for non-motorised users by creating quality facilities which could contribute to modal shift by local users and commuters has been missed. *ISAR Chapter 11 – Summary of Social and Distributional Impact Appraisal* acknowledges that the existing conditions on the A27 at Arundel "deter vulnerable users such as cyclists and pedestrians resulting in increased car usage." It goes on to say that '...the scheme is within an area of limited existing walking and cycling activity, therefore it has not been appraised in terms of impacts on physical activity'
- 4.74 Similarly, in addressing severance, the impacts of the scheme proposals on public transport or pedestrian modes have not been assessed.

5. Next steps

- 5.1 The SDNPA response focusses on the impacts on the Special Qualities and it is clear that all options are damaging in different ways and to varying degrees. Without detailed mitigation/compensatory plans it is not possible to say with any degree of confidence whether the damage caused by the construction of any of the schemes can be mitigated.
- 5.2 The recommendation is therefore to register a holding objection to all the schemes due to the overriding highly significant harm to the biodiversity, cultural heritage, access, recreation potential and landscape character and visual quality of the National Park and its setting.

6. Other Implications

Implication	Yes*/No
Will further decisions be required by another committee/full authority?	The NPA may be required to make further decisions dependent upon HE's progress with any scheme
Does the proposal raise any Resource implications?	Yes - Officer time to respond to information and subsequently once the preferred route is announced to comment on and influence the decisions made. These costs will be met from within the core budget
How does the proposal represent Value for Money?	No VfM issues
Are there any Social Value implications arising from the proposal?	No
Has due regard has been taken of the South Downs National Park Authority's equality duty as contained within the Equality Act 2010?	This report relates to the Authority's consultation response on the A27 Arundel proposals and it is considered that there are no equalities implications arising from the Authority's response.
Are there any Human Rights implications arising from the proposal?	No

Are there any Crime & Disorder implications arising from the proposal?	None arising from this report
Are there any Health & Safety implications arising from the proposal?	No
Are there any Sustainability implications based on the 5 principles set out in the SDNPA Sustainability Strategy?	The proposals have complex implications in terms of all five principles and a sustainable development approach requires that all be considered by HE in reaching preferred option

7. Risks Associated with the Proposed Decision

Risk	Likelihood	Impact	Mitigation
Opposing a bypass option through the SDNPA at Arundel is seen as;			
Stifling economic development opportunities.	Likely	Not significant	The economic study provides evidence that even with the most ambitious schemes the impact on the SDNP economy is likely to be low Purposes of the SDNPA, Evidence gathered, NPPF
Putting wildlife, landscape ahead of people	Likely	Possibly significant	
Failing to comment on the options presented opens the authority to risk of challenge that it is not delivering its statutory purposes	Low	Medium	

ANDY BEATTIE

Countryside Policy and Management – Wealden Heaths South Downs National Park Authority

Contact Officer:

Tel:

email:

Appendices

0. A27 Arundel options
1. A27 Arundel SDNPA Timeline
2. Position Statement for Major Projects
3. Defra family single voice letter

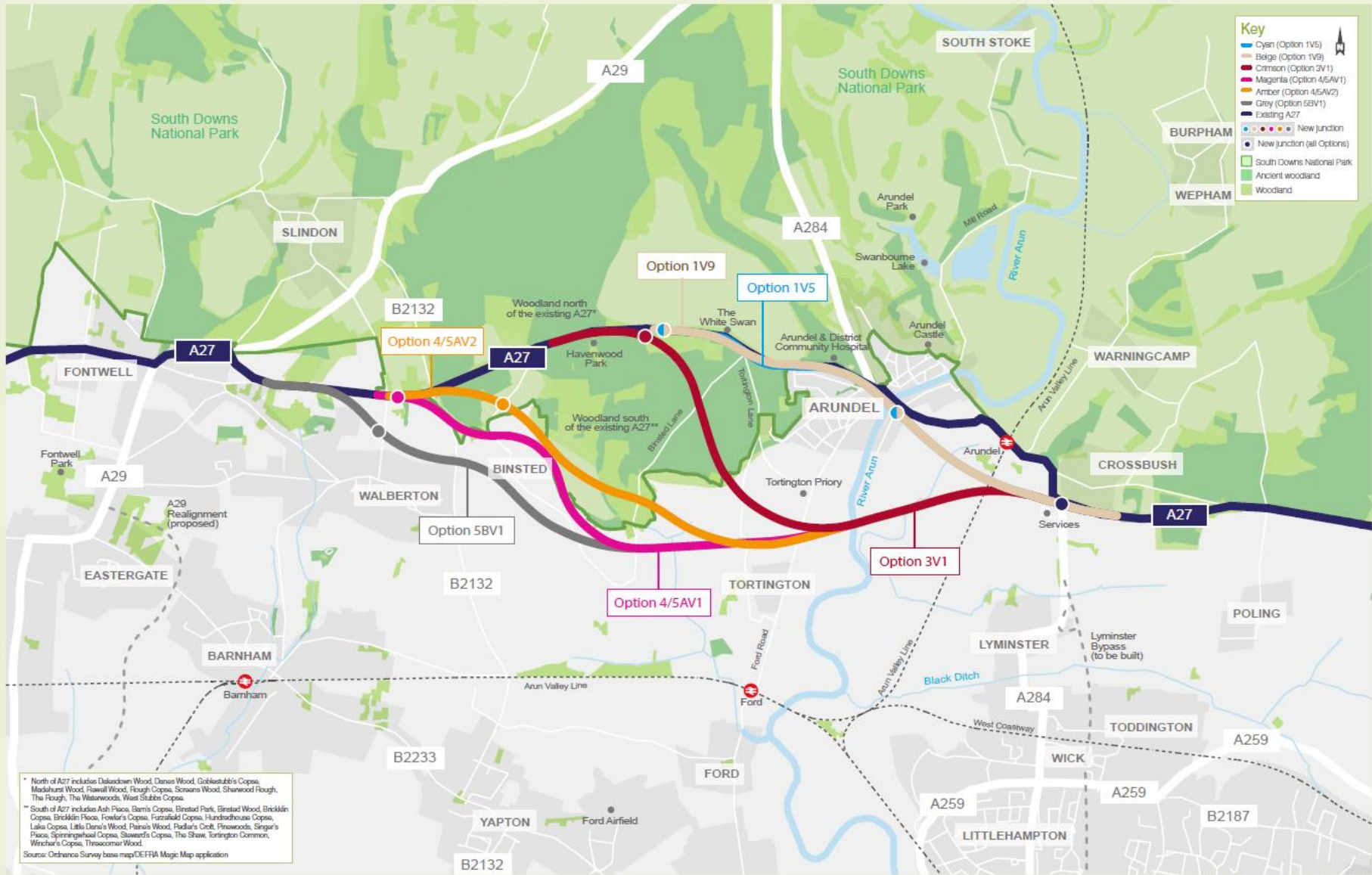
SDNPA Consultees

Chief Executive; Director of Countryside Policy and Management; Director of Planning; Chief Finance Officer; Monitoring Officer; Legal Services, Cultural Heritage Strategy Lead, Landscape and Biodiversity Strategy Lead (Water), Landscape and Biodiversity Lead (Chalk), Landscape Officer, Access and Recreation Strategy Lead, Planning Policy Manager, Sustainable Economy Strategy Lead

External Consultees	None
Background Documents	NPA Dec 14
	NPA Dec 15
	Members workshop Jan 16
	Pre P&P workshop Mar 16
	P&P Committee Mar 16
	NPA Mar 16
	P&R Committee Sep 17
	HE Consultation Materials, including;
	- A27 Arundel Bypass Further Consultation Environmental Assessment Report
	- Environmental Assessment Report Errata 16 September 2019
	- A27 Arundel Bypass Further Consultation Interim Scheme Assessment Report
- Interim Scheme Assessment Report Errata 16 September 2019	
- A27 Arundel Bypass - Environmental Sensitivity Testing Technical Note	



A27 Arundel Bypass Scheme options



This map is a diagrammatic representation. Not to scale. Contains OS data © Crown copyright and database right 2019 Ordnance Survey [100021242].

Arundel A27 Timeline for SDNPA Meeting

July 14	Sept 14	Oct 14	Feb 17	May 17	Sept 17	Sept 17	Oct 17
P&P	NPA	NPA	Workshop	Workshop	Workshop	P&R	NPA
Draft Position Statement	Draft Position Statement	Position Statement	A27 Economic Study	Site Visit	HE Presentation followed by Q&A	Response to non-statutory consultation	Propose response
Dec 17	May 18	Oct 18	Nov 18	Mar 19	Sept 19	Oct 19	
NPA	Special NPA	NPA	NPA	Workshop	Workshop	NPA	
Note response submitted and further QC advice	SDNPA response to Preferred Route	Discuss Judicial Review	Discuss HE Offer	Infrastructure update inc A27 Arundel	HE and SDNPA officers present and Q&A	Response to Non-Statutory consultation	

SOUTH DOWNS NATIONAL PARK AUTHORITY

Position Statement on A27 route corridor:



1. The approach set out below will be consistently applied by the Authority in the case of any future transport infrastructure projects – road, rail, airport or port related – which may come forward. In relation to roads in particular, Defra guidance in ‘English National Parks and the Broads - UK Government Vision and Circular 2010’, states:

‘there is a strong presumption against any significant road widening or the building of new roads through a (National) Park unless it can be shown there are compelling reasons for the new or enhanced capacity and with any benefits outweighing the costs significantly. Any investment in trunk roads should be directed to developing routes for long distance traffic which avoids the Parks’.
2. In responding to any general proposals or specific schemes for upgrading sections of the A27, the South Downs National Park Authority will frame its views according to the statutory Purposes of National Parks as laid down by Parliament:

Purpose 1 is to conserve and enhance the natural beauty, wildlife and cultural heritage of the NP
Purpose 2 is to promote opportunities for the understanding and enjoyment of its special qualities
3. In bringing forward schemes, and in the detailed design of any chosen options, the Highways Agency has a statutory duty under Section 62 (1) of the Environment Act (1995) “to have regard to the twin purposes of the National Park”.
4. There is a corresponding Duty on the Authority “to seek to foster the social and economic wellbeing of the local communities within the National Park in pursuit of the two Purposes”. This Duty is important and also relates to all of the Special Qualities.
5. The use of the term impact in this document follows the approach set out in EU Environmental Impact Assessment (EIA) legislation, ie such impacts may be positive or negative, direct or secondary, and will be considered relative to the impacts of the current situation.
6. In considering any proposals the South Downs National Park Authority will be mindful that the current state of congestion on sections of the A27 creates secondary impacts on routes within the National Park and its communities – for example pollution from stationary queuing vehicles or diversion of traffic onto smaller roads within the boundary. Where feasible, the primary impacts of any new schemes must therefore be objectively assessed alongside the potential secondary impacts.
7. In assessing the specific impacts of any detailed options the South Downs National Park Authority will ask the Highways Agency to use the framework of the seven Special Qualities of the National Park (see Note). These are listed below, and a full description is in **Annex A** . Under each SQ are described the types of impacts which proposed schemes might have on it and which the South Downs National Park Authority would expect to see objectively assessed:
 - 1) Diverse, inspirational landscapes and breath-taking views. (impacts to be assessed should include: effects on landscape character, experience of the landscape and long, uninterrupted views)
 - 2) Tranquil and unspoilt places. (impacts to be assessed should include: noise, lighting, effects on dark night skies; reduction of disturbance from some existing roads)
 - 3) A rich variety of wildlife and habitats including rare and internationally important species (impacts to be assessed should include; effects on internationally, nationally and locally designated and protected habitats and species, fragmentation and connectivity issues)
 - 4) An environment shaped by centuries of farming and embracing new enterprise. (impacts to be assessed should include; effects on the farming economy and diversification and the ability of new enterprises to set up and develop sustainable businesses)
 - 5) Great opportunities for recreational activities and learning experiences. (impacts to be assessed should include; effects on rights of way and other access routes, the effects on sustainable transport schemes, severance of the NP from coastal communities)

- 6) Well-conserved historical features and a rich cultural heritage. (impacts to be assessed should include; positive and negative effects on historic and protected monuments, historic villages and communities)
- 7) Distinctive towns and villages, and communities with real pride in their area. (impacts to be assessed should include; positive and negative effects of any direct or indirect changes in traffic volumes and speeds, and access to local services)
8. The Authority expects that any schemes which are ultimately proposed will:
 - Demonstrate that there is no alternative which would have avoided or had a lesser impact on the seven Special Qualities for which the National Park is nationally designated
 - Set out clearly, based on robust evidence, the nature and scale of these impacts
 - Demonstrate how these impacts would be mitigated or compensated for, bearing in mind that a National Park landscape is of national importance.
9. In considering the impacts of any such schemes, and any alternatives, the DfT travel hierarchy is also therefore vital in ensuring that all reasonable options have been fully considered alongside proposals for new infrastructure schemes, i.e. measures which:
 - Reduce the need to travel
 - Enable switching to more sustainable modes of transport
 - Improve management of existing networks
10. Clearly, a balance needs to be struck - nationally - between the need for accessibility and mobility and the need to safeguard the National Park landscapes and communities. This balance must be struck by Government based on robust evidence on both.

Annex A

All NPAs are required by Defra to set out and describe the Special Qualities (SQs) for which the particular NP landscape was designated and given national protected status. In the South Downs National Park these SQs were published in and formed the basis for the State of the National Park report 2012, informed the Partnership Management Plan 2014 and are informing the development of the Local Plan.



South Downs
National Park Authority

Rosemary's Parlour
North Street
Midhurst
West Sussex
GU29 9SB

South Downs National Park

Special Qualities

South Downs National Park

Special Qualities

Introduction

Within the diversity of the English countryside, the National Parks are recognised as landscapes of exceptional beauty, fashioned by nature and the communities which live in them. The National Parks and Access to the Countryside Act 1949 enabled the creation of the National Parks, and ensures that our most beautiful and unique landscapes have been, and will continue to be, protected in the future.

The purposes of National Parks are to conserve and enhance the natural beauty, wildlife and cultural heritage of the area and promote opportunities for the understanding and enjoyment of the special qualities of the National Park by the public. Working in partnership with other Local Authorities and organisations, National Park Authorities also have a duty to seek to foster the economic and social-well being of communities within the Park in carrying out the purposes.

The South Downs National Park is Britain's newest National Park. Situated in the heavily populated south east it has strong social, historical and environmental links with the major towns and cities in its hinterland.

The South Downs National Park is a living, working and ever-changing landscape, shaped by its underlying geology and its human history. It has many special qualities which together define its sense of place and attract people to live and work in the area and visit the National Park. These special qualities need to be understood, appreciated, conserved and enhanced.

The special qualities reflect both the engagement with stakeholders of the National Park and technical evidence.

I. Diverse, inspirational landscapes and breathtaking views

The geology of the South Downs underpins so much of what makes up the special qualities of the area: its diverse landscapes, land use, buildings and culture. The rock types of the National Park are predominately chalk and the alternating series of greensands and clays that form the Western Weald. Over time a diversity of landscapes has been created in a relatively small area which is a key feature of the National Park. These vary from the wooded and heathland ridges on the greensand in the Western Weald to wide open downland on the chalk that spans the length of the National Park, both intersected by river valleys. Within these diverse landscapes are hidden villages, thriving market towns, farms both large and small and historic estates, connected by a network of paths and lanes, many of which are ancient.

There are stunning, panoramic views to the sea and across the Weald as you travel the hundred mile length of the South Downs Way from Winchester to Eastbourne, culminating in the impressive chalk cliffs at Seven Sisters. From near and far, the South Downs is an area of inspirational beauty that can lift the soul.



Harting Down, West Sussex



Seven Sisters, East Sussex



The Hangers from Stoner Hill, Hampshire

2. A rich variety of wildlife and habitats including rare and internationally important species

The unique combination of geology and micro-climates of the South Downs has created a rich mosaic of habitats that supports many rare and internationally important wildlife species. Sheep-grazed downland is the iconic habitat of the chalk landscape. Here you can find rare plants such as the round-headed rampion, orchids ranging from the burnt orchid and early spider orchid to autumn lady's tresses, and butterflies including the Adonis blue and chalkhill blue.

The greensand of the Western Weald contains important lowland heathland habitats including the internationally designated Woolmer Forest, the only site in the British Isles where all our native reptile and amphibian species are found. There are large areas of ancient woodland, for example the yew woodlands of Kingley Vale and the magnificent 'hanging' woodlands of the Hampshire Hangers.

The extensive farmland habitats of the South Downs are important for many species of wildlife, including rare arable wildflowers and nationally declining farmland birds. Corn bunting, skylark, lapwing, yellowhammer and grey partridge are notable examples.

The river valleys intersecting the South Downs support wetland habitats and a wealth of birdlife, notably at Pulborough Brooks. Many fish, amphibians and invertebrates thrive in the clear chalk streams of the Meon and Itchen in Hampshire where elusive wild mammals such as otter and water vole may also be spotted. The extensive chalk sea cliffs and shoreline in the East host a wide range of coastal wildlife including breeding colonies of seabirds such as kittiwakes and fulmars.



Adonis blue butterfly



Round-headed rampion



Heathland habitat, Iping Common, West Sussex

3. Tranquil and unspoilt places

The South Downs National Park is in South East England, one of the most crowded parts of the United Kingdom. Although its most popular locations are heavily visited, many people greatly value the sense of tranquillity and unspoilt places which give them a feeling of peace and space. In some areas the landscape seems to possess a timeless quality, largely lacking intrusive development and retaining areas of dark night skies. This is a place where people seek to escape from the hustle and bustle in this busy part of England, to relax, unwind and re-charge their batteries.



Amberley Wildbrooks, West Sussex



Walkers on the South Downs Way, Devil's Dyke



Orchids on Beacon Hill, Hampshire

4. An environment shaped by centuries of farming and embracing new enterprise

The rural economy has strongly influenced the landscape and over 80 per cent of the South Downs is farmed. Past agricultural practices have produced some nationally valuable habitats including chalk downland and lowland heath, with traditional breeds specific to the area such as Southdown and Hampshire Down sheep significant in the past and still bred today. Many farmers and landowners are helping to conserve and enhance important habitats through environmental stewardship schemes. Large estates such as Goodwood, Cowdray, Petworth and Firle, with their designed parklands, have a significant effect on the landscape and the rural economy. The ownership of large areas of the eastern Downs by local authorities or the National Trust is a legacy of the early 20th century conservation movements to protect the iconic cliffs and Downs and the water supply to coastal towns.

Farming has always responded to the economy of the day and continues to do so. Some farmers are diversifying their businesses, for example by providing tourist accommodation and meeting the growing market for locally produced food and drink. Climate change and market forces continue to influence the landscape leading to new enterprises such as vineyards, and increasing opportunities for producing alternative energy, for example wood fuel.

However, the economy of the National Park is by no means restricted to farming. There are many popular tourist attractions and well-loved local pubs which give character to our towns and villages. The National Park is also home to a wide range of other businesses, for example new technology and science, which supports local employment.



Durleighmarsh Farm & Orchard, West Sussex



Harveys Brewery, Lewes, East Sussex



Sheep in the Meon Valley, Hampshire

5. Great opportunities for recreational activities and learning experiences

The South Downs offers a wide range of recreational and learning opportunities to the large and diverse populations living both within and on the doorstep of the National Park, and to visitors from further afield.

With 3,200 kilometres (2,000 miles) of public rights of way and the entire South Downs Way National Trail within the National Park there is exceptional scope for walking, cycling and horse riding. Many other outdoor activities take place such as paragliding, orienteering and canoeing. There is a chance for everyone to walk, play, picnic and enjoy the countryside, including at Queen Elizabeth Country Park in Hampshire and Seven Sisters Country Park in East Sussex.

The variety of landscapes, wildlife and culture provides rich opportunities for learning about the South Downs as a special place, for the many school and college students and lifelong learners. Museums, churches, historic houses, outdoor education centres and wildlife reserves are places that provide both enjoyment and learning. There is a strong volunteering tradition providing chances for outdoor conservation work, acquiring rural skills, leading guided walks and carrying out survey work relating to wildlife species and rights of way.



Cycling on the South Downs Way



Paragliding near Lewes

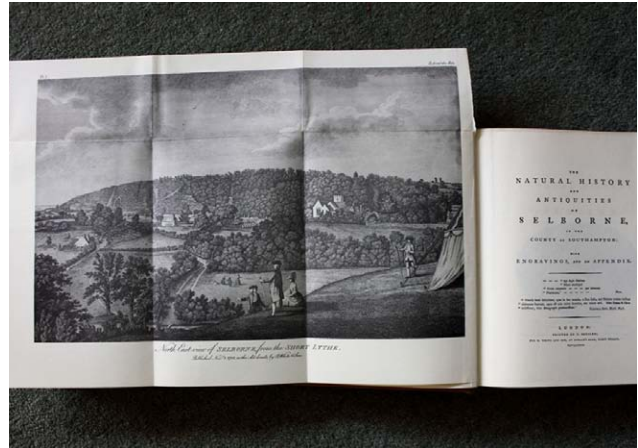


Butser Ancient Farm, Chalton, Hampshire

6. Well-conserved historical features and a rich cultural heritage

The distinct character of many areas of the South Downs has been created by well-conserved historical features, some of which are rare and of national importance. Bronze Age barrows, Iron Age hill forts, Saxon and Norman churches, dew ponds, historic houses and landmarks of the two World Wars help to give the National Park strong links to its past human settlement. These links are reinforced by the variety of architectural building styles spanning the ages. Evidence of earlier farming traditions can still be seen today in the pattern of field boundaries, and relics of the industrial past remain in the form of old iron workings, brickworks, quarries and ancient coppiced woodlands.

The South Downs has a rich cultural heritage of art, music and rural traditions. There is a strong association with well-known writers, poets, musicians and artists who have captured the essence of this most English of landscapes and drawn inspiration from the sense of place: Virginia Woolf, Jane Austen, Hilaire Belloc, Edward Thomas, Gilbert White, Edward Elgar, Joseph Turner, Eric Gill and Eric Ravilious, among many others. Today traditions continue through activities such as folk singing and events like Findon sheep fair. Culture lives on with new art and expression, celebrating the strong traditions of the past.



'The Natural History and Antiquities of Selborne' 1st Edition, by Gilbert White



Saxon Church, Singleton, West Sussex



The Chattri, above Brighton, East Sussex

7. Distinctive towns and villages, and communities with real pride in their area

The South Downs National Park is the most populated National Park in the United Kingdom, with around 110,000 people living within the boundary. Significantly more people live in the major urban areas and villages that surround the National Park including communities that are actively involved in the South Downs such as Brighton and Hove, and Eastbourne.

The South Downs is unique in having the largest market towns of any UK National Park - Lewes, Petersfield and Midhurst. The character and appearance of these and many other settlements throughout the National Park derives in large part from the distinctive local building materials. Picturesque villages like Selborne, Charlton and Alfriston blend into their landscapes.

Many of these settlements contain strong and vibrant communities with much invested in the future of where they live, and a sense of identity with their local area, its culture and history. Across the South Downs there are also communities of people who come together through common interests, for example, farming, conservation and recreation. These communities dedicate time and resources to enhancing community life, conserving what is important to them and planning for future generations.



The Lynchmere Society, West Sussex



Alfriston, East Sussex



Farmers' Market, Petersfield, Hampshire



13th August 2019

Dear Highways England

A27 Arundel Bypass - Defra single voice letter

The proposed options for the A27 Arundel Bypass are all located in a landscape and environment of national importance which is within, or in the setting of, the South Downs National Park.

The Environment Agency, Forestry Commission, Natural England and South Downs National Park Authority have worked jointly to provide a single voice position on a range of key issues identified at this stage. This letter provides you with the principles that we would wish to see taken forward through the next consultation and as the scheme progresses.

As an overarching principle we have advised that any option for the bypass should be considered in an integrated way at a landscape scale. This will ensure that impacts on a complex and interconnected ecosystem, set within a wider hydrological catchment, are fully understood alongside any impacts on the historic landscape.

We have identified that the scale and nature of this scheme in this significant location requires a bespoke approach.

Specifically we are all in agreement that the following considerations should be taken forward by Highways England:

Severance:

The options presented introduce the permanent and significantly harmful severance of this sensitive landscape, cultural heritage and its biodiversity. We have advised that a scheme of this nature in this landscape will require a tailored approach to mitigation.

It is essential that landscape, biodiversity, hydrology and cultural heritage are considered together in an environmental masterplan in order to appropriately address severance and resilience and to avoid the potential for addressing one issue to the detriment of another (see below)¹. We recommend that a body or consultancy is appointed to undertake this specific high level and visioning role as a priority. We have advised that the Natural Capital assets of the area must be included in the assessment.

¹ <https://www.gov.uk/government/publications/the-road-to-good-design-highways-englands-design-vision-and-principles>

We have advised that in order to provide a sufficiently robust level of assessment that the scheme clearly follows the mitigation hierarchy, evaluates each option with reference to this and adopts a landscape-scale of assessment. This is necessary in order to appropriately consider severance and resilience within this special landscape.

The scheme contains a notable assemblage of irreplaceable and priority habitats with associated rare and protected species, including all three Annex II species of bat. The presence of these species indicates the quality of this area and the permeability of the landscape

It is clear that severance in this location is of particular concern, the effects of which are most profound in the offline options. Severance must be considered in terms of functionality of this landscape, and its biodiversity within all habitats affected. Assessments must include the severance of species such as bats from roosting and feeding areas and on habitats such as ancient woodland affecting their resilience and ability of habitats and species to adapt to climate change.

The use of multiple quality green bridges in optimal locations will be a minimum requirement for each option.

Consideration of a Viaduct crossing of the River Arun Floodplain:

It is expected that all options presented will cross the River Arun and to date are being considered through the use of embankments. We all consider that an embankment would have serious and significant negative impacts on hydrology, biodiversity, landscape and cultural heritage.

We have advised that both the impact of introducing an embankment into the floodplain, and the costs associated with compensatory flood storage and habitat creation will be considerable.

An embankment will permanently sever the floodplain, reduce connectivity of wetland habitats and associated species and change the way that the river and floodplain interact. It would also sever Arundel from its valley with associated significant landscape and cultural heritage impacts.

Introducing a structure across the River Arun floodplain in this historic landscape would clearly have several impacts. We have advised that a viaduct would be far more permeable for wildlife, water and people.

We urge Highways England to consider a viaduct in place of an embankment.

Environmental Net Gain:

We would advise you that in line with your organisation's own targets and license to operate, and in recognition of the particular significance of this area, that any scheme demonstrates a clear ability to deliver considerable net gain.

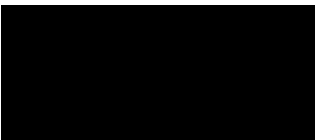
We would wish to see any scheme seek to provide a betterment from the existing baseline. Notably we have advised that we would wish to see improved connectivity of habitats across the existing A27 route.

It is our belief that through adopting a wider landscape scale approach and ensuring the key principles detailed above are taken forward you will be able you to meet your own objectives for this complex scheme. We advise that due to the nature and location of this scheme it is imperative that you deliver an exemplar road scheme in line with the aspirations of the Road Investment Strategy to deliver schemes that will be “trail-blazers for the future”².

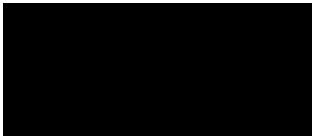
Please note this letter provides our collective view on key issues where we have shared responsibilities and interest.

The contents of this letter are given without prejudice to any further responses individual signatory organisations may provide on the breadth of their remits in the future.

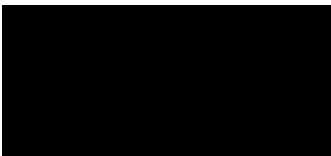
Yours sincerely,



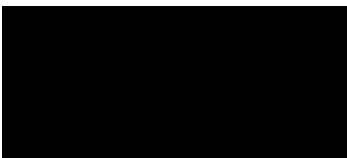
Environment Planning and Engagement Manager, Environment Agency



Partnership and Expertise Manager South East, Forestry Commission



Kent & Sussex Manager, Natural England



Director Countryside and Policy, South Downs National Park Authority

² <https://www.gov.uk/government/speeches/beautiful-roads>

To:
Highways England
3 Ridgeway
Quinton Business Park
Birmingham
B32 1AF

By email to: A27ArundelBypass@highwaysengland.co.uk

Cc: SDNPA

Date: 22-10-19

Dear Sir/Madam,

Highways England Consultation on Arundel By-Pass – October 2019

These are the comments of the Friends of the South Downs (South Downs Society) on the above mentioned plan. The Society has over 1,500 members and its focus is the conservation and enhancement of the landscape of the South Downs National Park (SDNP) and its quiet enjoyment. We comment on planning applications made in, or close to, the SDNP.

Thank you for giving us the opportunity to comment on this plan. Our comments are set out as attached.

Yours faithfully,

[Redacted Signature]

Policy Officer

SOUTH DOWNS SOCIETY

Tel: 01798 875073 Email: enquiries@southdownssociety.org.uk www.friendsofthesouthdowns.org.uk

"Friends of the South Downs" is the brand name of the South Downs Society, a company limited by guarantee, registered no. 319437 and is a registered charity no. 230329. The Society is an independent charity which relies on member subscriptions and gifts in wills.

Registered Office: 2 Swan Court, Station Road, Pulborough, West Sussex RH20 1RL

Highways England Consultation on Arundel By-Pass – October 2019

Summary

We consider that all four options presented by Highways England (HE), are environmentally unacceptable. There is also no benefit in building a bypass of near motorway standards when there is no possibility of motorway standard bypasses at either Chichester or Worthing.

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Our detailed comments are as follows:

Route Options

Turning to the Cyan (IV5) and Beige (IV9) options, we feel these are unacceptable: The 'land take' (dual carriageway and removal trees etc) and effect on the landscape far exceeds any possible benefits even if viewed from the roads only point of view.

Specifically:

- A well designed single carriageway with a speed restriction of 40mph would result in a steady flow along the realigned and straightened A27
- there would be traffic and environmental benefits by bypassing the steep hill past Arundel station (The Causeway).
- A new road crossing the river and valley would be less conspicuous if located as close as possible to the town, and would be little more obtrusive than the existing relief road.
- Traffic passing at 40mph would not result in excessive noise compared to 70mph traffic across the valley further south. (Lewes is affected by high noise levels from its A27 dual carriageway bypass.)

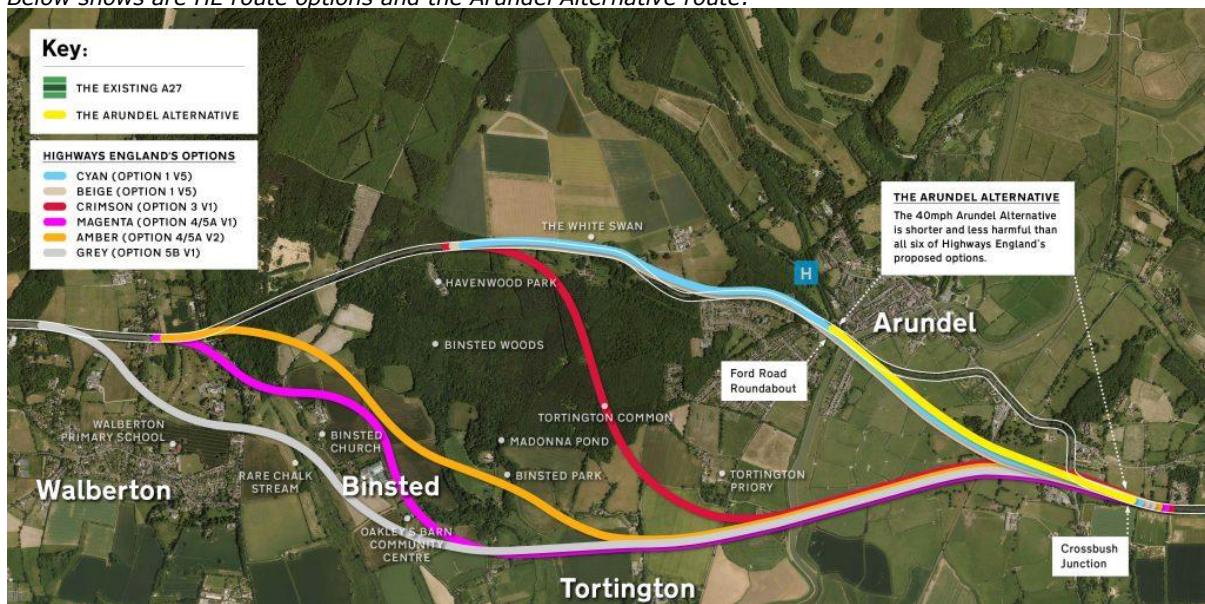
We therefore strongly support a single carriageway road, which does not involve building any section of new road through the SDNP. Compared to the 6 HE options this scheme would clearly have the least environmental impact, have the lowest cost, and could be implemented at the earliest date. We believe that with 3D modelling techniques the scheme details can be developed to achieve the best possible results.

This needs to be accompanied by measures to improve pedestrian and cycle movement across the A27 and in particular at Ford Road, with a bus service and off-road cycleway from Arundel to Ford station. We therefore we would ask you to consider the [Alternative Route](#) as supported by the [South Coast Alliance for Transport and Environment \(SCATE\)](#) and the [Arundel Bypass Neighbourhood Committee \(ABNC\)](#).

We would also ask you to put forward proposals [*to the Secretary of State*] to examine in detail this [alternative route](#), including carrying out detailed engineering studies while protecting the historical and landscape value of this unique valley. Also to:

- Take special care to adhere to the [Special Qualities of the South Downs National Park](#) including protecting and enhancing its bio-diversity and ensuring minimum light pollution in line with SNPA Local Plan Strategic Policy SD8 – Dark Night Skies.
- Dramatically improving air quality along the whole route of the A27 in Sussex
- Make provision for a significant increase in infrastructure for sustainable transport
- Make an 'action plan' to reduce carbon emissions from vehicles.

Below shows are HE route options and the Arundel Alternative route:



Further:

South Downs National Park

We support the South Downs National Park Authority in their response to the consultation, namely:

- That all the route options as currently presented, including the route outside the National Park (Grey Route 5BV1), impact negatively on the National Park and its setting. To varying degrees all would cause significant harm to the biodiversity, cultural heritage, access, recreation potential and landscape character and visual quality of the South Downs National Park.
- That Highways England should be urged to address, as a priority, the shared concerns raised in the Single Voice letter sent by the DEFRA family (Forestry Commission, Natural England, Environment Agency and the SDNPA).
- That in the absence of both a detailed scheme plan, and a committed and funded mitigation and compensation package, it is not currently possible to rank the options in terms of their impacts upon the National Park.

Also we would like you to take note of and/or act on the following:

Government Action on Carbon Emissions (Greenhouse gas emissions)

According to the UK Government - transport accounted for 33 per cent of UK emissions last year, (provisional official statistics), more than any other sector. They say "*The large majority of emissions from transport are from road transport*". Our Appendix A shows a considerable commitment to tackling this by the UK Government. We are very surprised therefore that the HE Environmental Assessment Report says it is expectation that greenhouse gas emissions will rise as a result of their options!

Transport for the South East (TfSE)

Our Society is concerned that this consultation has been made in advance of the approval of the strategy for Transport for the South East. As you may know this strategy is out for consultation currently and is not due to be formally published until later in 2020. We believe the TfSE strategy will have a significant bearing on transport planning across the south coast. Indeed, TfSE have specific reference to developing a multimodal approach to transport modelling on south coast transport corridor. See our Appendix B.

A27 at Chichester & Worthing

We are concerned that this Arundel proposal has been brought forward in advance of resolving Highways England (HE) routing strategy for both Chichester and the Worthing area. We appreciate that these sections present significant difficulties for HE but until transport routes and funding are agreed in these areas pressure on the surrounding roads in West Sussex will not be resolved; with or without an Arundel by-pass. NB: we understand the base business case for Arundel is predicated on the assumption that the A27 scheme at Worthing and Lancing will go ahead, although at present this has been mothballed by the Department for Transport (DfT).

Integrated Transport Planning (or the lack of it)

We are concerned that Highways England seem to be working in isolation to Network Rail. As you will see from our appendix C they are developing plans to increase capacity on the West Coastway rail corridor, including the Arundel link to Horsham and Gatwick.

Despite government funding currently being separated out into different 'silos' for road and rail we would hope that the agencies themselves will seize the initiative to work together and produce a solution which is altogether better for transport and the environment and uses the benefits of each mode of transport to best effect,

Proposal for Sustainable Transport

Highway England in their consultation document says: [Our comments are in blue italics]

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. ***No evidence is provided to support this opinion.***

Access would be maintained for pedestrians, cyclists and horse riders across all six options, although some existing routes would need to be diverted. ***We are disappointed that very little effort has been made by HE to provide for walking and cycling. For instance, the image below shows that anyone wishing to go from south of Crossbush to the Arundel town side would have to cross to very fast moving traffic of the proposed entry/exit lanes of the A27. No traffic lights are proposed and no alternative routing is suggested by way of a green tunnel or a green bridge. Also, in another location a public footpath is proposed to be diverted by considerable distance when a simple green tunnel could have been provided.***

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. ***No evidence is provided to support this opinion. As we have mentioned in Appendix C, Network Rail are indeed planning improvements to capacity on the West Coastway line as well as on the 'Arundel chord' line up to Horsham and Gatwick stations.***

See HE design extract below:



The importance of the lower Arun river valley below Arundel

Whilst this is not in the National Park we would submit:

One may recall that when the boundaries of the South Downs National Park were being considered the then Countryside Agency initially suggested that Arundel town itself, Binsted Woods, Tortington Common, Binsted and Tortington villages, and the river valley immediately south of the town should be within the park. This was strongly supported, indeed proposals were put forward to extend far further south, to include the river valley as far as the east-west Coastway line. The Campaign for the Protection of Rural England and the Youth Hostel Association went even further, proposing that the Park should extend to the sea at Climping beach! In the event the draft boundary the CA suggested was smaller and Arundel and the water meadows were left out of the Park.

Nevertheless, the water meadows of the lower Arun valley provide an extremely important setting to Arundel, its Castle and Cathedral and the Downs beyond, and any new road across the valley would have a severe visual impact:

View from the south looking towards Arundel (photo by permission of Vic Ient)



Appendix A – Government Action on Carbon Emissions

In submitting our remarks our Society are mindful of the Government's unfolding commitment to tackling the threat of climate change to our planet. In particular, we would draw your attention to:

- 1) According to the UK Government - transport accounted for 33 per cent of UK emissions last year, according to provisional official statistics, more than any other sector. They say "***The large majority of emissions from transport are from road transport***". See: [2018 UK Greenhouse Gas Emissions provisional Figures Statistical Release: National Statistics published in March 2019](#)
- 2) UK Government publication of the [Draft 'Road Investment Strategy 2'](#) released in October 2018 entitled 'Moving Britain Ahead.' Jesse Norman MP Parliamentary Under Secretary of State for Roads, Local Transport and Devolution said in the forward, amongst other things, the future road strategies need to have "a positive impact on its surroundings" he also referred to a 'green infrastructure'.

Referring to 2050 (presumably the zero carbon target which was made law in June 2019) the document went on to set out 5 key statements including the following:

"A greener network: through its use of environmentally and visually sensitive 'green infrastructure', and management of the verges and open spaces, good design will minimise the air, light, noise, and visual impacts of the SRN. Enhancements to the SRN will meet high standards of design, responding to a local sense of place, and working wherever possible in harmony with the natural, built and historic environments".

- 3) UK Government statement published 15 October 2019 entitled '[UK to go further and faster to tackle climate change](#)' where the Government set out its measures to 'go further and faster to tackle climate change, in response to Committee on Climate Change (CCC) recommendations' The publication include key note comment by Transport Secretary Grant Shapps where he said:

"From driving our cars, to catching a train or taking a flight abroad, it is crucial that we ensure transport is as environmentally friendly as possible. This is why, as well as agreeing to the CCC's recommendation on [net zero](#) by 2050, we have launched this ground-breaking plan to achieve net zero emissions across every single mode of transport".

We would also draw to your attention to the following UK government publications:

- House of Commons passed motion to declare an 'environment and climate change emergency' on 1st May 2019.
- The law for net zero carbon emissions by 2050 in the UK has been passed at the House of Commons. The UK is amending the 2050 greenhouse gas emissions reduction target in the Climate Change Act from at least 80% to 100%. The Climate Change Act 2008 (2050 Target Amendment) Order 2019 came into force on 27th June 2019 introducing a target for at least a 100% reduction of

greenhouse gas emissions (compared to 1990 levels) in the UK by 2050. This is otherwise known as a net zero target.

- 25 Year Environment Plan launched in January 2018: A Green Future: Our 25 Year Plan to Improve the Environment
- Road to Zero Strategy: Next steps towards cleaner road transport and delivering our Industrial Strategy. New cars to be ultra-low emission by 2030 (Published 9 July 2018).
- Clean Air Strategy 2019 (Published 14 January 2019).
- Plans to end the sale of all new conventional petrol and diesel cars and vans by 2040. There will also be a new Clean Air Fund established as promised by the government in July 2017.
- Plans for tackling Roadside Nitrogen Dioxide Concentrations (Published 26 July 2017)
- The Chancellor's announcement in the Spring Statement on Wednesday 13 March 2019: Gas boilers will be banned in new homes from 2025 to tackle climate change. Measures will be included in a Future Homes Standard Policy
- Advice from the UK Government's Committee on Climate Change
- Commitment to: The Carbon Plan: Delivering our low carbon future (Published December 2011)

Appendix B – Transport for the South East (TfSE) Strategy

Transport for the South East (TfSE) is a new regional transport body. It is looking to co-ordinate strategic transport planning across the South East. [TfSE launched a draft strategy](#) on October 10th. This consultation is due to close on Friday, 10 January 2020. Later in 2020 the strategy will be finalised and presented to Government.

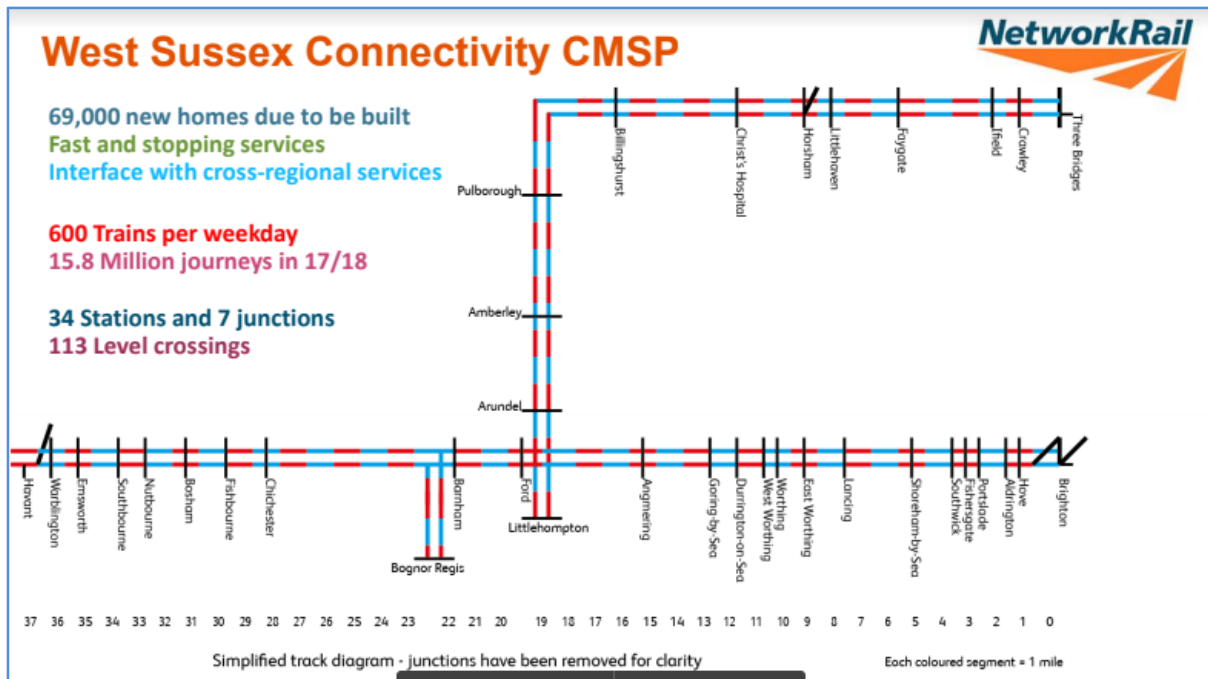
On the main page of their strategy website they say: “Transport is the only sector whose environmental impact continues to grow while others reduce theirs”. They go on to say they want to tackle issues like congestion, air quality, employment, housing and energy while growing a sustainable economy – together and in a joined-up way.

Their opening remarks are (we have underlined some key statements)

- The journey to a more prosperous, sustainable South East will rely on working in partnership toward a shared vision, and planning around people – not vehicles. Our strategic priorities set out what we need to achieve along the way.
- Cutting the South East’s carbon emissions to net-zero by 2050, minimising its contribution to climate change.
- A seamlessly integrated transport network with passengers at its heart. Resulting in simpler journey planning, payment and interchanges between different forms of transport.
- Improved air quality supported by initiatives to reduce congestion and emissions, and encourage more use of public transport.
- A transport network that protects and enhances our natural, built and historic environments. One which embraces the principle of ‘biodiversity net-gain’ and consumes less resources and energy.
- A ‘smart’ transport network using digital technology to manage transport demand, encourage shared transport and make more efficient use of our roads and railways.

Appendix C Rail Improvements in West Sussex

Network Rail SE Region is currently running the 'West Sussex Connectivity CMSP' looking at significant upgrades to the West Coastway line and faster and more frequent services between Havant and Brighton, along with improvements for the Arun Valley line. The Network Rail work addresses: local and long distance rail connectivity; wider transport connectivity with other modes including ways of reducing traffic congestion on key roads; accommodating future growth in peak time travel demand and housing growth. At a recent (Oct 19) south coast meeting of [Railfuture](#) a strategic planner updated those present confirming the above. Here is an extract from the presentation:



This follows on from a strategy presentation made in April 2019 by Network Rail on the West Coastway. Click [HERE](#) to see the PDF of the presentation.

Submission by South Stoke Parish Council

Following feedback from residents of South Stoke and Offham Villages, as chairman of South Stoke Parish Council, I would like to submit the following.

In response to the HE A27 Arundel Bypass public consultation, South Stoke Parish Council including Offham, is in favour of supporting the Magenta Route (Option 4/5AVI).

The Parish supports the objectives of Highways England (HE) scheme to reduce local congestion and to improve journeys along the corridor between Brighton and Portsmouth. In particular it supports the Magenta route as set out in the consultation document as the least worst option.

As residents of the Parish, our access and egress to and from the A100 and the Town is often severely limited by the bottlenecks created by the weight of traffic on the current single carriage way.

In particular, access along Mill Road onto Queens Road and the A100 can be impeded when the weight of traffic either causes rat running along the High Street or when there are bottlenecks at the Crossbush and Ford roundabouts.

This happens most regularly at early morning or evening commute times or when holiday traffic leaves Mill Road at holiday times and the weekends. It also occurs when there are accidents and hold ups on the A100 itself.

In addition, there is often rat running at speed through Arundel High Street when traffic backs up behind the Ford roundabout.

The A100 is a national and regional Route and up to 1000 of its use is through traffic which together with local traffic causes significant noise and air pollution to Arundel town.

As stated, we recommend that HE select Magenta route as the least disruptive route.

Above all the Cyan and Biege solutions must be avoided at all costs as they would divide Arundel and also involve compulsory purchase of certain houses. Neither would it solve the worsening noise/light

and air pollution. The time alone to complete the project would cause significant damage to the local economy which would have a long term adverse effect on Arundel.

We also do not feel it is worth supporting the Crimson route as this was discarded at the last consultation.

Finally South Stoke does not support the Grey Route as this route although outside the National Park would cause irreparable damage to the village of Alberton.

It is noted that all the routes apart from Grey run through the SDNP but it is considered that Magenta would also be the optimum route in respect of reducing rat running not only in Arundel but also in surrounding villages including nearby villages such as Storrington Amberley and Houghton.

 Chairman of South Stoke Parish Council

St Mary's Binsted

St Mary's Vicarage, The Street, Walberton,
Arundel, W. Sussex BN18 0PQ

19 September, 2019

Dear Sir

A27 Consultation

We are writing to you as the rector and churchwardens of St Mary's Binsted regarding the current consultation for the A27 Arundel bypass.

We wish to express our objection to the Grey, Magenta, and Amber routes on the following grounds.

The church is a 12th century grade II listed building and is an important centre of village life. It is the only freely available public space and is used for community events such as the annual Arts weekend. The church and churchyard are frequently visited on a daily basis by walkers and cyclists accessing the National Park and those seeking peace and solitude. We are concerned about the impact of noise pollution, as well air pollution and light pollution at night. Binsted and its church are presently shielded by the woods from the A27. That would cease to be the case under any of these three options adversely affecting the whole of the village.

The Grey route would totally destroy the setting of the church running within 50meters of the churchyard. The church would be downwind for air and noise pollution. It is unlikely that anyone would want to worship there. We may as well close down.

The Magenta route would cut off the church from the majority of users who come over from Walberton by closing Hedgers Hill as a through road. There would be no direct link between the two halves of the benefice/civil parish. Parishioners would have to go north of the A27 by some distance before turning south towards Binsted Lane. Binsted itself would become split in two, unattractive and unused. The Magenta route would come to within 300m of the church. This will turn the setting of the church and its active burial ground from one of peace and tranquillity to one of urban noise and pollution, making quiet contemplation impossible. This route would also put an end to the Strawberry fair which supports the church as it runs through the car parking area and within 50m of the field where the fair takes place. (The beautiful outdoor ambience of the pub which draws people to Binsted would also be destroyed and it would be cut off from its customers.)

The Amber route should also be rejected. The Amber route itself would come to within 400m of the church. Binsted being a small community, the church can only survive by attracting people from outside the parish to the annual Strawberry Fayre which raises funds for the upkeep and repair of the building. The flint barn and field used for the fayre

Incumbent of Walberton with Binsted.

Tel: [REDACTED]

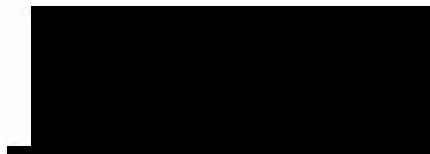
will be about 250-300 metres from the proposed road. The fayre is unlikely to survive in such close proximity to the road and this in turn will jeopardise the church's future.

More generally, the church and the village as a whole, survives by attracting people into it for recreation, worship and business. Binsted will lose its unique atmosphere and cease to be an attractive place for visitors. The National Park south of the present A27 will have a huge unattractive obstacle between it and its most frequent local users. We note that the Amber route actually runs through more new National Park land than the Crimson route and should be rejected. Finally, the Amber route will truncate the village twice, once at each end of Binsted Lane. The houses there will no longer feel part of Binsted.

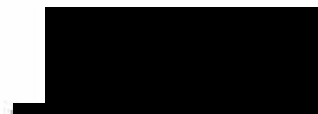
Yours sincerely



rector



churchwarden



churchwarden

Incumbent of Walberton with Binsted.

Tel: 



Thu 26/09/2019 19:13

[Redacted]

I support the MAGENTA option for the proposed A27 by pass

To [A27 Arundel Bypass](#)

Please take this email as my confirmation that my business and myself personally strongly support the MAGENTA option of the current proposed options for the A27 by-pass.

Kind regards,

[Redacted]

Operations Director
The Brewhouse at Arundel Ltd
The Brewhouse Project
Lyminster Road
Arundel
BN17 7QN
01903-889997

[Redacted]

Patron Her Majesty The Queen

The British Horse Society
Abbey Park,
Stareton,
Kenilworth,
Warwickshire CV8 2XZ

Email enquiry@bhs.org.uk
Website www.bhs.org.uk
[REDACTED]
Tel 02476 840500
[REDACTED]

The
British
Horse
Society

[REDACTED]

Sent by email to:

A27ArundelBypass@highwaysengland.co.uk

22nd October 2019

Dear Sir

A27 Arundel Bypass Further public consultation

The views expressed in our response to the 2017 consultation on this Scheme remain unchanged, in that we wish to ensure that whichever Scheme Option is chosen, it will provide maximum benefits for non-motorised user (NMU) safety and facilities, especially in regard to equestrians. On the Coastal Plain (CP) equestrians have always been dependent on local road use, but these roads have become unsafe and unusable, due to the increasing volume and nature (HGVs) of vehicles using them as a direct result of development, of which a great deal more is planned.

We would again draw your attention to the Highways England (HE) Design Manual for Roads and Bridges (DMRB) 42/17 Walking, Cycling & Horse Riding Assessment and Review, which specifically requires the design team to assess the existing provision in a schemes location to identify any potential opportunities to provide or improve opportunities for walkers, cyclists and horse riders, so that these can be maximised. Para 4.26 states that "*Gaps in existing networks shall be identified where these are in close proximity to the proposed highway scheme so that opportunities for improvement and/or betterment can be identified.*" **These opportunities for NMU network improvements should be integral to the scheme.**

HE's own Interim Scheme Assessment report for the Scheme, para 8.9.13, acknowledges NMU facilities on the existing A27 to be poor, advising that a number of opportunities for the provision of additional NMU facilities as part of de-trunking of the A27 have been identified. There is no detail of what these NMU facilities might be, so they cannot be commented on. There are concerns about these improvements being '*separately funded*', which begs the question what funding will be available, and where will it come from? It is our view that this does cast doubt on the importance of the provision of NMU improvements to the Scheme.

The recently published WSCC Rights of Way Management Plan (2018-2028), and Arun District Council's Local Plan, highlight the lack of multi-use (bridleway) routes on the CP in this area, and the need to provide safe NMU off-road paths south of the A27, together with safe access to the excellent

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network of routes north of the A27 in the South Downs National Park (SDNP) for all vulnerable road users (walkers, cyclists, and equestrians). All NMUs made a significant contribution to the local economy, with equestrians estimated to provide around £5000 pa each, however, this industry in particular will struggle to survive without major improvements to the access and public rights of way (prow) network to ensure equestrian safety.

Listed below are suggested equestrian improvements (which would of course benefit all NMUs), we feel should be delivered as part of the Scheme.

1. Regardless of whether the existing A27 is de-trunked or not, at least two safe crossings are needed (either overbridge or Pegasus), which allow access across the A27 for NMUs. Safe connectivity whether for reasons of utility, community access, or leisure and recreation are of equal importance for the wellbeing of all. For equestrians ideal location options include:

- a) Poling Corner (GR 046059) Poling Street (south) to Blakehurst Lane (north). With a BW link to Crossbush Lane.
- b) Binsted Lane (GR 002073) Binsted Lane/Tortington Lane to BW 415 (link needed) and BW 386 (permissive link currently available).
- c) Walberton (Barn's Copse) (GR 978070) Direct crossing BW 397 (north) and BW 3667/336 (south)
- d) Walberton (Potwell Copse) (GR 966068) Direct crossing BW 392 north to south.

Whichever locations are chosen for safe crossings, they must be accessible to all NMUs and therefore, must incorporate links to existing or new multi-use routes on the Coastal Plain, and in the SDNP. There is no point in providing a safe crossing point if NMUs cannot safely reach it, and local roads on the Coastal Plain such as Ford Road and Yapton Lane will still be very busy with HGVs etc.

2. To provide connectivity for all NMUs, the proposed foot/cycleway on the northern side of the A27 should be made a 3m or 4m link bridleway from Ford Road junction to BW 397 near Shellbridge Road. This will enable all NMUs to access the cul-de-sac public rights of way, both footpaths and bridleways, at present severed by the A27 along this section, and permit walkers, cyclists, and equestrians to create their own safe circular routes of varying distances.


3. It should be noted that it is extremely dangerous for NMUs to use Yapton Lane to access Hedgers Hill Road, so benefits to vulnerable road users from the proposed closure to vehicular traffic (Options Magenta/Amber) is very limited. An upgrade to bridleway of FP350 would bring greater benefit.

4. HE should also be aware that a Definitive Map Modification Order, to upgrade FP 342 to bridleway status, is with the Secretary of State awaiting a decision. The outcome could affect any decision on the type of bridge necessary where a proposed Option crosses the footpath.

For the future, I am aware local riders will be looking to gain access to the proposed path alongside the River Arun, so the width and height of any overbridge proposed in the scheme, should be more than adequate for multi-use.

Following HE's future decision on a 'preferred route', we would request that both the BHS and local Arun Bridleways Group are involved in discussions around detailed planning of NMU improvements.

Yours faithfully


County Access & Bridleways Officer (West Sussex)

[REDACTED]
Project Manager of the A27 Arundel Bypass
Highways England
Bridge House,
Walnut Tree Close,
Guildford
GU1 4LZ

14th October 2019.

Dear [REDACTED]

Re: A27 Arundel Bypass.

I am writing to you in my capacity as the owner of The White Swan Hotel, Chichester Road, Arundel further to my recent meeting with your colleagues at Littlehampton Town Council offices on Tuesday 1st October.

It is clearly frustrating from all aspects that this project has been delayed and the consultation reopened but putting that to one side I detail below my views on the project.

- Cyan and Beige.

These routes would destroy The White Swan commercially and quite likely physically and would require the compulsory purchase of a successful hotel employing 34 long-serving and loyal local staff and paying several hundred thousand pounds of local and national taxes per year. This would fly in the face of the statement on page 10 of the latest brochure that states "all options would support local ...employment growth".

From a broader Arundel perspective these routes would slice the town in two, create a barrier to any future economic or tourism growth and not actually bypass the town at all.

They also impact a large number of residential properties and it feels like these would be sacrificed as they are not "prime properties", which has a very unpleasant ring of socio-economic discrimination attached to it.

These two routes are strongly opposed.

- Crimson and Amber.

These routes would achieve the aim of by-passing Arundel but given the major adverse impact on SDNP and ancient woodland it seems unlikely that they would be able to overcome the planning constraints those two issues place on these routes.

These two routes are opposed on that basis alone.

- Grey.

This route would certainly avoid the planning constraints of the SDNP and ancient woodlands but would have a larger impact on Walberton than the more limited impact the alternative Magenta route has on Binsted.

This route is opposed purely on that basis.

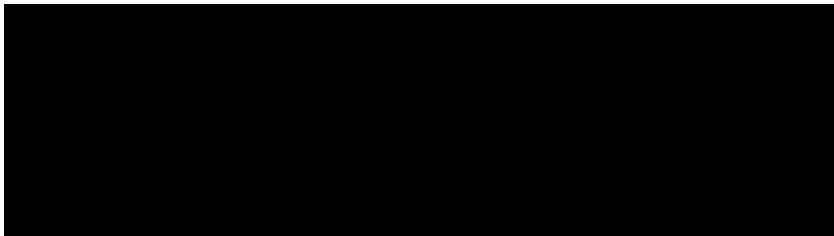
- Magenta.

This route has a minor impact on SDNP and ancient woodland and a low level of impact on residential properties. It also, in common with Grey, would maximise the positive benefits for Arundel of creating a distinct one-town identity and enhance the unique and beautiful nature of the town and enable the development of a strong tourism trade.

This route is supported on these grounds.

I appreciate the time and energy you and your colleagues put into the first consultation process and please would you take my comments above into consideration when presenting your next proposals.

Yours sincerely,



Executive Chairman

Emailed to: A27ArundelBypass@highwaysengland.co.uk

24 October 2019

Dear Sirs

TfSE Response to the A27 Arundel Bypass Further Consultation

Transport for the South East welcomes the opportunity to respond to the A27 Arundel Bypass further consultation.

Transport for the South East (TfSE) is an emerging Sub-national Transport Body (STB) which is being established in line with provisions of the Local Transport Act 2008 (as amended). As a STB, TfSE's principal role is to facilitate sustainable economic growth through the development of its transport strategy which will identify the transport infrastructure required to deliver additional housing and employment space across the region.

TfSE provides a single voice across its geography on the transport interventions needed to support growth. The South East is crucial to the UK economy and is the nation's international gateway for people and business. High-quality transport infrastructure is critical to making the South East more competitive, contributing to national prosperity and improving the lives of our residents.

Our Economic Connectivity Review (ECR) published in 2018 provided a detailed analysis of the underlying socioeconomic conditions of the area and showed the key roles that the transport network and its strategic corridors have in driving economic growth in the South East and the UK. The A27 was identified as one of the key strategic corridors where the evidence suggests that economic investment in transport infrastructure should be focussed to generate maximum future return.

The A27 is the only major east-west trunk road south of the M25 and links a number of the cities and ports that are critical to the UK economy. Our consultation draft Transport Strategy published earlier this month has built upon the evidence and analysis conducted in the ECR and confirms the A27 as a key orbital transport corridor across our area. Our draft Strategy recognises that sections of single carriageway road limit capacity and highlights that there are significant areas of congestion on this corridor. Our draft Strategy further identifies that the poor performance of this corridor represents a significant barrier to fostering sustainable growth along the South Coast.

The South East has a varied and highly valued natural environment, parts of which are also designated due to the quality of the environment, and this helps make the area an attractive place to live, work and visit. Our draft Strategy strongly supports economic growth, but not at any cost, and is clear that any intervention in the area's transport networks must ensure that the environment is protected and where possible enhanced.



0300 3309474

tfse@eastsussex.gov.uk

transportforthesoutheast.org.uk

Transport for the South East, County Hall,
St. Anne's Crescent, Lewes, BN7 1UE

The South East is a popular location for leisure walking and cycling, and our strategy suggests that there is scope to expand the infrastructure to encourage more sustainable forms of transport, particularly for more local journeys.

The stated objectives of the A27 Arundel Bypass scheme are aligned with the TfSE vision, goals and priorities set out in our Transport Strategy, and therefore TfSE supports the need for intervention on the A27 at Arundel to address the current congestion issue and to remove the constraint to future economic growth. However, we consider that it is not within our remit to comment upon any particular route option. We would expect that in developing the scheme, the highest standards of design are employed that will provide a long term solution that delivers potential economic benefits and successfully mitigate its environmental impacts.

We consider that in accordance with Government policy every effort must be made to ensure that biodiversity net gain is achieved through this project, and we would therefore expect that a high quality package of environmental mitigation measures is developed and delivered as part of the scheme.

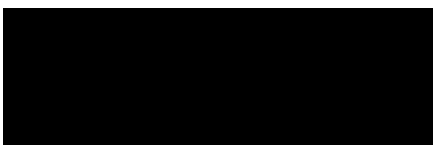
We also consider that there are opportunities to provide enhanced infrastructure and provision for non-motorised users and that these should be included in the design of the preferred route.

We note that although £100-£250 million has been allocated for the A27 Arundel Bypass through the Road Investment Strategy only two of the six options are considered broadly deliverable within this budget. The delivery and budget for major highway improvements in or near environmentally designated areas should reflect a need for the highest standard of design, including environmental mitigation. Although this cannot come at any cost, it is considered that the design and budget for the Arundel bypass scheme should be determined by what is needed to fully deliver on Highway England's strategic objectives, rather than just what is affordable within the current budget.

This is an officer response. The TfSE Shadow Partnership Board meets on 11 December 2019 to consider the draft response and a further iteration of the response may follow.

Please do not hesitate to contact me if you would like to discuss any element of this response.

Yours sincerely,



Lead Officer, Transport for the South East



0300 3309474

tfse@eastsussex.gov.uk

transportforthesoutheast.org.uk

Transport for the South East, County Hall,
St. Anne's Crescent, Lewes, BN7 1UE

A27 Arundel Bypass

Submission from the Trustees of Arundel
Group Riding for the Disabled
Association



A27 Arundel Bypass

From the Trustees of Arundel Group RDA

The Trustees of Arundel Group for Riding for the Disabled Association (RDA) support the need for a bypass for the historic market town of Arundel. However, we would like to make an appeal against the beige and cyan coloured routes - Options 1V9 and 1V5 of the proposed A27 Improvement Schemes.

These proposed routes threaten the future of Arundel Riding Centre at which we are based. Arundel Riding Centre has, for 40 years, freely given their ponies and facilities to our Group enabling Arundel Group RDA to provide riding without charge to children and adults with disabilities who would otherwise be unable to ride.

Arundel Group RDA is supported by a large group of volunteers and a professional instructor. Some young riders require the assistance of three people to support them on their pony, plus an instructor to guide the lesson. Most of our riders are children and young people but participants range in age from 6 to 66 years.

All volunteers undertake RDA safety, handling and horse management training. The high standards of the Group were recognised when the Princess Royal, patron of RDA National, honoured us with a visit on our 35th anniversary in 2014.



The therapeutic benefits of riding are evidenced by the Group's long association with the Lavinia Norfolk Centre at The Angmering School. Riders come weekly from this specialist centre with staff support. Representatives of the Arundel Group meet with staff to agree developmental goals and consider how riders' physical, social and emotional needs can be supported. The movement of the horse can reach muscles nothing else can and for wheelchair users it is the best way they can feel movement through their spine. The recognition of the physical benefits is recognised by local

paediatric physiotherapy centres that make, or suggest to parents to make, an application to the Group. Sadly we have a long waiting list.

However, the best evidence of the benefits and enjoyment of riding is the reactions of our riders themselves. For example, adult rider Linda says “After my stroke I never thought I would ride again - you have given me my life back”. 10-year old Chloe wrote what Arundel RDA means to her: “Arundel RDA is a fun place to be because I love stroeking (sic) Bryan, Toffee and Dublin”.

The impact of the beige and cyan routes (Options 1V9 and 1V5) on Arundel Riding Centre would be devastating; likely to force closure. The loss of access to turnout fields, increasing dangerous road crossing to the South Downs and increased traffic on the approach would force out this traditional family business which celebrates its 60th anniversary in 2020.

Arundel Riding Centre was given a 5-star rating when inspected by the West Sussex Licensing Authority in March 2019. Comments were made referencing the excellent condition of the stables and the welfare commitment to the horses and ponies. The fields the Centre needs to give this level of care would be lost if the 1V9 and 1V5 options were granted. The proprietor of the Centre, Alison Leggett, feels she would be unable to continue if the Centre could not maintain its animals to the highest standards.

The British Horse Society on their inspection in October this year again commended Arundel Riding Centre. The Centre is a local employer and a supporter of training for young people studying for a career in the equine industry. Clients and visitors to the area have the opportunity to enjoy the advantages of the South Downs National Park from horseback. Longer rides take them over fields and bridleways in this area of outstanding beauty and this would be lost if the beige or cyan routes were chosen. Arundel Riding Centre is an asset to the historical and natural environment of Arundel. In its long standing support of Arundel Group RDA the Centre demonstrates its inclusiveness and commitment to the community.



From:

The Trustees of Arundel Group Riding for the Disabled
Association (Charity Registration No: 1074378)

[REDACTED] (Chairman)

[REDACTED] (Secretary)

[REDACTED] (Treasurer)

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

% Arundel Riding Centre, Park Place, ARUNDEL, West Sussex.
BN18 9BE

www.arundelrda.org.uk

arundelrda@gmail.com



WALBERTON PARISH COUNCIL
INCLUDING FONTWELL AND BINSTED

Parish Council Office, The Pavilion, The Street,
Walberton, Arundel, West Sussex, BN18 0PJ

Tel: 01243 554528

email: [REDACTED]

www.walberton-pc.gov.uk

Highways England
Bridge House
1 Alder Tree Close
Gildford
GU1 1LQ

01 October 2019

[By email](#)

Dear Sirs

A27 Arundel Bypass Consultation

With reference to the A27 Arundel Bypass Consultation which ends today 01 October 2019, Walberton Parish Council met on 01 October to consider its response and agreed the following:

WPC Consultation Response

This consultation response is informed by the Parish Council's own members' knowledge and that of parishioners. The Parish Council has listened closely to its residents and noted their reactions. The Parish Council is potentially one of the most adversely affected stakeholders and it here responds on behalf of all its residents.

Prior to the consultation, the Parish Council published a set of self-identified required principles for the consultation to which it would adhere and to which it expected HE and other stakeholders also to adhere. The Parish Council supports the overall objective of improving traffic flow through the whole A27 corridor, any improvements should benefit all communities, safeguard traffic conditions on local roads and prevent the displacement of congestion and of severance from one place to another, fair and equal engagement and transparency, an evidence-based approach to option description and effectiveness, accounting for economic and environmental support and sustainability, costed mitigation, a realistic outlook for planning, value for money and affordability.

PC is disappointed that HE has failed to run a consultation that meets these common-sense criteria. PC will if necessary report to HE and other relevant bodies in that regard. However, some of these shortcomings affect our parishioners and our own responses to the options. It is right therefore to mention them here as they qualify our views.

WPC Response to the Six Consultation Options

PC notes that in respect of affordability and as underlined by questionnaire item B, only two options are around or below the budget maximum of £100 million. Of the over-budget options, option 11 (Crimson) is the one that our parishioners could well favour as in 2011 HE originally maintained this option had no realistic chance of gaining planning permission under a Development Consent Order as it is not supported by the National Planning Policy Framework. PC would wholeheartedly support this option without qualification or complaint if HE made positive moves to establish consents for Crimson. See below.

Of the affordable options, PC finds option 19 (Beige) meets the principles outlined above and is otherwise satisfactory, but notes that it may not be effective in the longer term at resolving traffic issues. Option 10 also meets the principles PC set itself and is otherwise satisfactory. It does not have the future traffic issue but its shortcoming is that it allows no interchange with local traffic at Ford roundabout. The maximum budget and value for money criteria are met approximately equally by both options. HE describes the planning scenarios, economic benefits and environmental damage from both routes as similar. PC believes that as to a loop flyover or a throughabout at Ford, option 10 (Cyan) or option 19 (Beige), HE technical traffic engineering judgements should take precedence together with whichever of the two options Arundel Town Council in its consultation response has preferred. **WPC is able therefore to support either option 10 Cyan or option 19 Beige, whichever at-budget option is selected.**

Limitations of 2019 Consultation

PC believes that the Consultation may have been run in a materially unfair manner and that its outcome might therefore be open to challenge. The consultation does not accord with PC principles in the following ways:

1. Arundel Alternative

PC notes that there is debate as to whether HE was using a fair, transparent and evidence-based approach in recommending a wide single carriage way option, put forward by Arundel's local residents with ASCATE. As of six weeks into this consultation, PC's information is that this route would apparently meet traffic handling and economic benefit objectives and also be less costly, better value for money and less environmentally damaging than all options offered to the public.

2. Inclusion of Boring and Lancing

The consultation documents and data assume this adjacent road scheme proposal has already been carried out. This fact is not made clear to the public, being referred to mostly in footnotes.

PC notes that the Office of the Road and Rail Regulator has stated that *only those schemes that ... have stakeholder support are taken forwards* and of the Worthing Lancing proposal that it is *under review and ... unlikely to go ahead in (its) current form*. DfT says *"increasing the budget at Worthing still doesn't give Highways England a viable scheme"*. The proposal was rejected by many of stakeholders and many of the public. Alternative proposals were rejected by HE as not being viable for money or being over budget. Although the current Worthing Lancing proposal will not be going ahead, this Arundel consultation makes its completion a key assumption. PC thinks this is not fair, transparent or evidence-based with a consequent risk to scheme delivery.

Over Budget Options

In the questionnaire on the matter of a Department for Transport maximum budget limit question it is clear that the offline options cannot be afforded but many other questions presuppose that they can be afforded even though these are up to many above the DfT's top figure of £10 billion. The *Have Your Say* brochure makes no mention at all of the budget being flexible. PC notes the option costs already have a worryingly large £18 million £100 million average range. It is hard to believe that these freshly estimated costs with even that very broad range in accuracy might still be okay. PC and its residents like many others are wholly confused as to whether there is a budget figure or just a vague DfT negotiating figure and further that the most likely costs are supposed to be. This complete lack of clarity and credibility intensified by a biased questionnaire will undoubtedly skew public voting patterns and undermine the validity of the consultation outcome. A consultation report will not therefore be truly reflective of public opinion. PC thinks this is not fair or evidence-based with a risk to delivery.

Option 11 Crimson

As above at our parish meeting this option was well supported. It has historically from *well before 2017* - been the preferred compromise route of local communities. PC members were dismayed by comments made to them by HE and by our MP and others in both 2017 and 2019 saying it was unattainable. In the last few weeks we have written confirmation from HE that the Crimson option is in fact viable and that there is no clear planning reason for them to indicate a negative planning outcome. As best it can PC has confirmed this is legally correct. Therefore on this ground it considers the consultation has lacked transparency and fairness, and been unsatisfactorily muddled and divisive. An attempt at the end of the consultation period to build stakeholder and public consensus for Crimson was unsuccessful.

Misleading Benefit Cost Ratios

The total of benefits allowed in the BCR ratio should be restricted to those that result from the expended costs used in the ratio in this case benefits accruing only from the cost of the Arundel Bypass scheme itself. Benefits that flow from the Worthing proposal therefore have to be excluded. But for the Arundel public consultation document these Worthing Lancing benefits were not excluded. This gives a very misleading impression of the options viable for money. There are further unexplained data series regarding benefits that have been included. PC thinks this is not fair, transparent or evidence-based with a risk to delivery.

□ Misleading Traffic Data

In several instances the HE traffic data is clearly challengeable for example the A8 at Storrington and at Yapton Lane. These are repetitions of errors in the first consultation whose data the High Court said were arguably clearly and radically wrong. Other traffic data are also questionable for example the A Fontwell and Crossbush growth in traffic and the Lyminster Bypass data these impact on local traffic outcomes and on the benefits from the options which largely rely on traffic growth and journey time calculations. These missing or inexplicable data cast an aura of doubt over the computer traffic model outputs and the derived BCR ratios as a whole potentially undermining the validity of the consultation's outcome.

□ General

□ PC notes a widespread unfairness in the consultation process with many questionable issues not satisfactorily answered or not published in a timely manner by HE in time for the public to have the necessary information to respond as it would wish. These are not covered here but taken collectively with the shortcomings outlined above PC must reserve its position on whether there has been a material impact on its residents and others voting intentions.

Yours sincerely

sent signed by email


Parish Clerk

WASHINGTON PARISH COUNCIL



Clerk to the Council.

Small Croft, Georges Lane, Storrington,
West Sussex. RH20 3JH

Email: clerk@washingtonparish.org.uk

Website: www.washingtonparish.org.uk

22nd October 2019

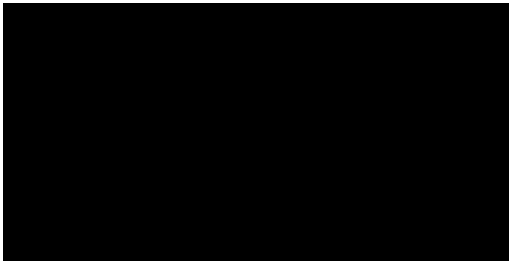
Dear Sir/Madam,

Re: A27 Arundel Bypass Further Consultation Response from Washington Parish Council

Councillors discussed the A27 proposals by Highways England and consultation documents for the above scheme at the Washington Parish Council's Planning & Transport Meeting on 21st October 2019.

On balance, Councillors favour the Magenta option as the most economically and environmentally viable, as it shows the greatest reduction in traffic flows on the A283 through Washington, Storrington and surrounding areas.

Kind regards

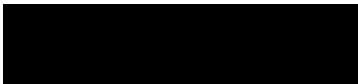




Thu 10/10/2019 13:17

West Chilmington Parish Council

Comment on A27 Arundel Bypass Proposals



To A27 Arundel Bypass

West Chilmington Parish Council would like to submit the following comment to the A27 Arundel Bypass proposals –

West Chilmington Parish Council support The 'Magenta' option. It would provide the best outcome, having less impact on the environment than many other options, and the most likely to alleviate the air quality and quantity of traffic in the surrounding areas, with the least disruption.

Regards

Clerk to the Council
West Chilmington Parish Council
Parish Office
Church Street
West Chilmington
RH20 2JW
01798 817434

The Parish Council office is normally open on Tuesday, Wednesday and Thursday from 10.00am-2.00pm

[REDACTED]
Cabinet Member for Highways and
Infrastructure

Cabinet Office
County Hall
West Street
Chichester
West Sussex
PO19 1RQ



www.westsussex.gov.uk

24 October 2019

Letter sent by email

Dear Highways England,

Re: West Sussex County Council Response to Further Consultation on
Options for A27 Arundel Bypass

Thank you for the opportunity to respond to the further consultation on options for the A27 Arundel Bypass. For many years, West Sussex County Council (WSCC) has campaigned for a long-term solution to the daily problems on A27 at Chichester, Arundel, Worthing & Lancing which contribute to poor economic performance and pockets of deprivation on the West Sussex Coast. Consulting on options is a positive step forward towards the delivery of an A27 Arundel Bypass.

Highways England is requested to have regard to the contents of this Consultation Response before selecting a preferred route for the A27 Arundel Bypass.

This consultation response includes selected questions from Highways England's Consultation Questionnaire and provides a supporting rationale for the County Council's responses. At the end of the letter are also some general comments that Highways England is also requested to take into account whichever option is selected.

In preparing this Consultation Response, a draft version was scrutinised at a meeting of the County Council's Environment, Communities and Fire Select Committee on 21 October 2019. This Consultation Response has been approved through a Key Decision, which is subject to a call-in period. Provided that it is not called-in for further scrutiny, it will come into effect at 5pm on 4 November 2019. If the Key Decision is called-in for further scrutiny, then Highways England will be notified.

Consultation Questions and WSCC Responses

Question B1. If the all options are brought into an affordable range, which option would you prefer? (Please tick one option)

WSCC response: Magenta (Option 4/5AV1)

Rationale

Option 4/5AV1 (Magenta) would have beneficial traffic impacts by: reducing congestion; attracting traffic to the A27 from parallel local roads in the South Downs National Park and on the coast that are used as rat-runs; and substantially reducing the volume of traffic in Arundel. This option would also result in substantial economic benefits that are noticeably greater than Option 1V5 (Cyan) and Option 1V9 (Beige), especially because the latter would not provide sufficient highway capacity to cater for traffic growth and, over the longer-term, congestion is forecast to return by 2041.

It is recognised that Option 4/5AV1 (Magenta) would negatively affect the communities of Tortington, Binsted and Walberton. However, on balance, it is considered that Option 4/5AV1 (Magenta) would have a slight beneficial impact on community severance because the significant benefits to the community in Arundel would outweigh the adverse impacts on those smaller communities.

It is noted that the environmental assessment of Option 4/5AV1 (Magenta) has not taken into account the presence of a well preserved medieval pottery kiln that would be affected by this option although it appears likely that it could be successfully mitigated. Provided that an amendment is made to the design to address this matter, the environmental impacts of this option are similar to Option 1V5 (Cyan), but Option 4/5AV1 (Magenta) would result in less Ancient Woodland loss and includes a shorter length of road within SDNP. The alignment of Option 4/5AV1 (Magenta) would also have less impact on the historic settlement of Binsted and cross the Binsted Rife in a less prominent location than Option 5BV1 (Grey).

Although the economic benefits of Option 3V1 (Crimson), Option 4/5AV2 (Amber) and Option 5BV1 (Grey) are greater than Option 4/5AV1 (Magenta), they have worse environmental impacts. Option 4/5AV2 (Amber) would have greater impacts on Ancient Woodland and the noise, townscape and historic environment impacts of Option 5BV1 (Grey) have been underestimated because the environmental assessment has not taken account of impacts on the Avisford Grange development at Walberton or some impacts on the historic environment. The latter includes: (a) the severance of Binsted as a historical settlement into three parts, isolating its most ancient and historically important building, St Mary's Church; and (b) severance of the view along the Binsted Rife valley by crossing this very visible feature of the local historical landscape in an open area.

Therefore, the traffic, economic and social benefits of Option 4/5AV2 (Amber) and Option 5BV1 (Grey) are unlikely to outweigh their adverse environmental impacts to the extent that they perform better than Option 4/5AV1 (Magenta).

Overall, of the options available, Option 4/5AV1 (Magenta) offers the best balance between traffic, economic and social benefits and environmental impacts, taking account of impacts on Ancient Woodland and SDNP. This is because it is the second best option for environmental impacts and impacts on Ancient Woodland and SDNP whilst also being third best option for economic benefits.

Accordingly, the environmental impacts of Option 4/5AV1 (Magenta), if appropriately mitigated, are likely to be significantly outweighed by the

substantial traffic, social and economic benefits of this option over the longer term. Therefore, provided that a detailed and high quality package of mitigation measures is identified and delivered as part of the scheme to reduce impacts on the environment and affected communities, Option 4/5AV1 (Magenta) is the County Council's preferred option for an A27 Arundel Bypass. This is because it is the best performing option and it represents the best fit with the strategic objectives that the Authority is seeking for the A27.

Question B2. The scheme budget is currently £100-250m. Affordability is an ongoing concern and if only Cyan and Beige (Options 1V5 and 1V9) remain affordable, which option(s) would you support? (Please tick all that apply)

WSCC response: Do Nothing

Rationale

The cost of delivering major highway improvements in this area should reflect that there is a need to provide the highest standard of design, including environmental mitigation. Although clearly this cannot come at any cost, the County Council considers that the design of the scheme should be determined by what is needed to deliver its strategic objectives, rather than what is affordable.

General WSCC Comments

Highways England is also requested to take into account the following comments:

A27 Transport Model

The A27 Transport Model is considered to be an appropriate tool to use to assess the relative performance of the options at this stage of the project, including the impact on the local highway network. However, Highways England should work with the County Council at the next stage of the project to ensure that local roads are adequately represented and also work with local stakeholders to ensure that the modelling information is well understood.

Highway Design

Whichever option is selected as the preferred route, the design will need to be refined to ensure that access routes are maintained and, in some cases, to ensure that undesirable effects on the local road network, such as creation of new rat-runs, are effectively managed. This should take place at the next stage once a preferred option has been selected.

Ford Road Junction

It is recognised that some local stakeholders would like to see a junction between Ford Road and an A27 Arundel Bypass, principally to reduce traffic on other routes. However, other stakeholders are concerned that this could lead to increased use of Ford Road as an access to/from Arundel. Highways England has not included this junction within the design of Options 3V1 (Crimson), 4/5AV1 (Magenta), 4/5AV2 (Amber) or 5BV1 (Grey) at this stage and intend to decide on its inclusion at the next stage of the project. The 2018 Arun Local Plan does not require the delivery of an A27 Arundel Bypass or a junction with Ford Road, so it is not needed to deliver currently planned development.

However, a junction between Ford Road and A27 Arundel Bypass could facilitate future development and, therefore, Highways England are encouraged to ensure the design is future-proofed to accommodate a Ford Road junction at some point in the future.

Facilities for Non-Motorised Users

The Government's RIS1 states that; *"we will also develop sustainable transport measures at Arundel, Worthing, Lancing and east of Lewes"*. However, although the designs do include some new facilities for Non-Motorised Users (NMUs), largely where they are needed to maintain public rights of way, the proposed facilities are fairly limited in scope and fail to integrate the scheme into the wider network of NMU facilities.

This is disappointing because opportunities to maximise the facility of off-road access are available in all options. This can be achieved, as a minimum, by providing new infrastructure (i.e. crossings) that is suitable for use by as many modes of transport as possible and up-grading the status of public footpaths to public bridleways or even restricted byways to provide a coherent network of routes. It can also be achieved by ensuring that grade separated crossings of the A27 are available to as many modes of transport as possible. This will help to improve safety for PROW and road users leading to improved health, leisure and community benefits of each option as well as facilitating access to employment and services. Therefore, new facilities for NMUs on the bypassed section of A27 and new connections between Arundel and Ford, the proposed A284 Lyminster Bypass, and along the River Arun should be included in the design of the preferred route; such matters should be discussed with the County Council at the next stage of the project.

Therefore, at this stage in the development of the scheme, it is the County Council's view that the limited range of NMU measures currently identified are unlikely to meet the Government's ambition for the provision of sustainable transport measures at Arundel as set out in RIS1.

If it is reasonable to expect that these measures will change traffic demand on the A27, then this should be taken into account alongside other committed transport improvements as part of the scheme appraisal. The County Council considers that this will help to respond to requests from some local stakeholders for an integrated package of transport improvements.

Other Options

Highways England should satisfy themselves that they have not discounted other options that would perform better than the options presented for consultation before selecting a preferred route for the scheme.

Economic Assessment

The benefits of the options take into account the effects of the planned A27 Worthing and Lancing and A284 Lyminster Bypass schemes. The County Council remains committed to the delivery of these schemes, so potential uncertainty about their delivery is not considered to be a justifiable reason not to proceed with one of the options for an A27 Arundel Bypass. Furthermore, this potential uncertainty should not be a determining factor in the decision about which

option to pursue, as this should be based on an assessment of the impacts (positive and negative) and the views of local stakeholders.

Environmental Assessment of Historic Environment Impacts

The environmental assessment has not taken into account the presence of a well preserved medieval pottery kiln that would be affected by Option 4/5AV1 (Magenta) although it appears likely that it could be successfully mitigated. Please contact the County Council in due course for further details.

Environmental Assessment of Biodiversity Impacts

It has been highlighted that the impacts on woodland of options 1V5 (Cyan) and 1V9 (Beige) may be overstated because the Arundel Arboretum has been incorrectly defined as 'woodland', although there are still trees on the site that may be affected by these options. Although it is not considered that this error changes the County Council's assessment of the options, Highways England should take this into account before selected a preferred route.

Environmental Mitigation Package

The County Council is disappointed that details of the mitigation measures for each option have not been provided as each option would have major adverse environmental and community impacts. These measures appear to have been identified to inform the cost estimates and could have helped to address the concerns of affected communities. The County Council is aware that some local stakeholders will not be satisfied that this information has not been published and also that no clear explanation has been given for this omission. Therefore, we encourage Highways England to explain its rationale for this decision in due course.

In accordance with Government policy and expressed aspirations, every effort must be taken to ensure biodiversity net gain is achieved through this project, in line with the Biodiversity Net Gain Assessment. The feasibility of the following measures should be investigated in developing a detailed and high quality package of environmental mitigation measures: extensive landscaping/screening; translocation of soils from Ancient Woodland to create new compensatory habitats; creation of 'green bridges' to maintain connectivity between Ancient Woodland; extensive noise mitigation; and new facilities for NMUs. Although it is not possible to replace Ancient Woodland, it is considered that it should be possible to compensate for this loss to an acceptable level, provided that sufficient land can be identified to create compensatory woodland.

An embankment would have significant detrimental impacts on landscape and visual amenity, local hydrology, reduce the flood capacity of the floodplain, sever ecological networks, and result in a significant increase in mitigation and compensatory habitat creation costs. Therefore, the environmental impacts of a viaduct, particularly on landscape and visual amenity, the water and historic environments and biodiversity including habitat severance effects are likely to be less than an embankment. Arundel is a sensitive location with a long-standing history of difficulty in securing the delivery of a bypass, principally due to the impacts on environmentally designated areas. Therefore, we consider that highway improvements on this scale should include the highest standard of environmental mitigation. The County Council is leading by example by including a viaduct in its planned A284 Lyminster Bypass (north). For these

reasons, we consider that Highways England should design and seek additional funding to deliver a viaduct at the next stage of the project, provided that it can be demonstrated that the additional benefits would outweigh the costs and that this would not cause delay to the project.

Construction

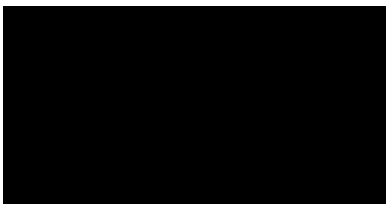
To minimise the amount of additional road traffic during construction, the County Council would welcome the use of the nearby ports, particularly Littlehampton Harbour, to transport construction materials.

Need for Additional Funding

It is acknowledged that the budget range for the A27 Arundel Bypass in Roads Investment Strategy (2015-20) is £150-250m. The deliverability of Option 3V1 (Crimson), Option 4/5AV1 (Magenta), Option 4/5AV2 (Amber), and Option 5BV1 (Grey) is dependent upon additional funding being secured. The A27 is the only trunk road south of M25 linking key economic centres on the south coast, so it is considered to be of national importance. This is recognised by Transport for the South East which has identified that the A27 corridor should be a focus for investment. Also, due to the sensitivity of the local environment, the cost of delivering major highway improvements in this area should reflect that there is a need to provide the highest standard of design, including environmental mitigation. Although this cannot come at any cost, it is considered that the design of the scheme should be determined by what is needed to deliver Highway England's strategic objectives, rather than what is affordable. The County Council will support Highways England in seeking the additional funding to deliver Option 4/5AV1 (Magenta), as the County Council's preferred option.

I hope that this information is helpful.

Yours sincerely,



Cabinet Member for Highways and Infrastructure

West Sussex Local Access Forum



wslaf@westsussex.gov.uk

www.wslaf.org

24 October 2019

Sent by email to: A27ArundelBypass@highwaysengland.gov.uk

Dear Sir/Madam

A27 Arundel Bypass - Consultation

I am responding to the above consultations on behalf of West Sussex Local Access Forum (WSLAF).

West Sussex Local Access Forum (WSLAF) is an independent advisory body, established under the Countryside and Rights of Way Act 2000, to give access advice to local authorities, statutory organisations and non-government organisations. In giving that advice the Forum's main objective is to ensure the existing network of public rights of way (PRoWs), as well as the wider access network, is protected and where possible enhanced. The Forum has a balanced membership of knowledgeable and experienced users (walkers, cyclists, horse riders and carriage drivers), landowners and other interests (including conservation, disabled access, landscape). For further information about the Forum please visit www.wslaf.org.

The Forum's response to the 2017 consultation on the Arundel Bypass Scheme advised that Members consider the existing A27 is a significant north-south barrier to non-motorised users (NMUs) trying to safely access either the South Downs National Park (SDNP), or the Coastal Plain (CP), and our view has not changed. Crossing a busy dual carriageway at grade is an unattractive and dangerous prospect for those seeking quiet countryside leisure and recreation, or a visit to the beach, whether walking, cycling or horse riding, and the importance of these activities for mental health and well-being should not be underestimated.

West Sussex County Council's [Rights of Way Management Plan \(2018-2028\)](#) and Arun District Council's Local Plan recognise the lack of NMu routes in the coastal plain (CP), especially bridleways (multi-use routes), and the need to improve and provide safe access to the excellent network of routes north of the A27 in the SDNP for all vulnerable road users. Members remain firmly of the opinion that this Scheme, whichever Option is chosen as the preferred route, must identify and provide significant benefits for all NMUs. NMUs must be encouraged to leave their cars/horseboxes at home, but in order to do this facilities provided must be easy to access and use, follow a natural desire line, and be enjoyable.

The National Planning Policy Framework (NPPF) requires planning policies and decisions to protect and enhance PRoW and access, and protect ancient woodland. Members have expressed concerns that the removal of ancient woodland and the blighting of countryside by large scale road developments would damage the amenity of high quality walking, cycling and horse riding countryside in the area.

The Forum will not be commenting in detail at this stage on all possible NMU improvements to the six options currently under consideration. However, when a 'Preferred route' has been chosen we definitely wish to be involved in providing specific comment and advice on NMU improvements.

We note that Highways England (HE) acknowledges NMU facilities on the existing A27 to be poor (Interim Scheme Assessment report Para 8.9.13) but it is recognised that a number of opportunities for the provision of additional NMU facilities as part of de-trunking of the A27 have been identified. While this recognition is welcomed there are concerns that as these improvements would be 'separately funded' this might result in a delay to their provision.

In the Scheme booklet (page 11) the final paragraph states that 'access would be maintained for pedestrians, cyclists and horse riders'. Whilst this aim is supported, 'maintaining' is not improving, and that should be the overall aim. Whilst Members who have attended exhibitions and talked to Officers have generally found that HE has given consideration to the issues around PRow and NMUs, there are concerns as to whether this will result in any meaningful improvements.

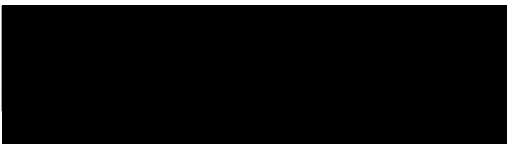
As a basic minimum the Forum considers that, whether the A27 is de-trunked or not, at least two safe bridleway crossings should be provided (location and design to be agreed in discussion with local organisations). These crossings should be suitable and accessible to all NMUs and should incorporate links to existing or new multi-user routes on the CP and to the north. This will allow NMUs to use routes away from local roads which are becoming increasingly busy and unsafe, due to the increasing development on the CP.

On the north side of the A27 from Ford Road a 3m, or preferably 4m, NMU route (bridleway) should be provided to link all the cul-de-sac PRow which are currently severed or terminate at the A27 into the SDNP. This will enable NMUs to enjoy circular routes of varying distances in the area.

This letter constitutes formal advice from the West Sussex Local Access Forum. Highways England is required, in accordance with section 94(5) of the Countryside and Rights of Way Act 2000, to have regard to relevant advice from this Local Access Forum in carrying out its functions.

The Forum looks forward to being updated on progress on the Scheme, and to future involvement regarding NMU matters when a 'preferred route' has been chosen.

Yours sincerely



West Sussex Local Access Forum



Freepost A27 Arundel

23 October 2019

Dear Sir/Madam

Reference: A27 Arundel Bypass Further Public Consultation

As the UK's leading woodland conservation charity, the Trust aims to protect native woods, trees and their wildlife for the future. We own over 1,000 sites across the UK, covering around 24,000 hectares (59,000 acres) and we have 500,000 members and supporters.

Ancient woodland

Natural England defines ancient woodland *“as an irreplaceable habitat [which] is important for its: wildlife (which include rare and threatened species); soils; recreational value; cultural, historical and landscape value [which] has been wooded continuously since at least 1600AD. It includes:*

- *Ancient semi-natural woodland [ASNW] mainly made up of trees and shrubs native to the site, usually arising from natural regeneration*
- *Plantations on ancient woodland sites – [PAWS] replanted with conifer or broadleaved trees that retain ancient woodland features, such as undisturbed soil, ground flora and fungi”¹*

Both ASNW and PAWS woodland are given equal protection in the National Planning Policy Framework (NPPF) regardless of the woodland's condition.

Veteran trees

Natural England's Standing Advice on veteran trees states that they *“can be individual trees or groups of trees within wood pastures, historic parkland, hedgerows, orchards, parks or other areas. They are often found outside ancient woodlands. They are irreplaceable habitats either some or all of the following characteristics... A veteran tree may not be very old, but it has decay features, such as branch death and hollowing. These features contribute to its biodiversity, cultural and heritage value.”*

Loss of ancient woods and trees

The Woodland Trust **strongly opposes** all of the proposed route options put forward as part of this consultation, as they will all result in detrimental impact and/or loss of ancient woods and trees. The areas of ancient woodland of concern are appended in a table at the bottom of this document.

¹ <https://www.gov.uk/guidance/ancient-woodland-and-veteran-trees-protection-surveys-licences>

Planning policy

The **National Planning Policy Framework**, paragraph 175 states: *“When determining planning applications, local planning authorities should apply the following principles:*

c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons⁵⁸ and a suitable compensation strategy exists;”

Footnote 58, defines exceptional reasons as follows: *“For example, infrastructure projects (including nationally significant infrastructure projects, orders under the Transport and Works Act and hybrid bills), where the public benefit would clearly outweigh the loss or deterioration of habitat.”*

Further to this, paragraph 170 of the NPPF states the following: *“Planning policies and decisions should contribute to and enhance the natural and local environment by: minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.”* Where a development involves the loss of irreplaceable habitats that have taken centuries to develop, such as ancient woodland, net gains for biodiversity cannot possibly be achieved.

Paragraph 5.32 of the **National Policy Statement for National Networks** states: *“Ancient woodland is a valuable biodiversity resource both for its diversity of species and for its longevity as woodland. Once lost it cannot be recreated. The Secretary of State should not grant development consent for any development that would result in the loss or deterioration of irreplaceable habitats including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the national need for and benefits of the development, in that location, clearly outweigh the loss. Aged or veteran trees found outside ancient woodland are also particularly valuable for biodiversity and their loss should be avoided. Where such trees would be affected by development proposals, the applicant should set out proposals for their conservation or, where their loss is unavoidable, the reasons for this.”*

Policy ENV DM4 (Protection of Trees) within the **Arun Local Plan (2018)** states: *“Development will be permitted where it can be demonstrated that trees protected by a Tree Preservation Order(s), (TPO) identified as Ancient Woodland, in a Conservation Area or contributing to local amenity, will not be damaged or destroyed now and as they reach maturity, unless development:*

- C. The benefits of the proposed development in a particular location outweigh the loss of trees or woodland, especially ancient woodland.”*

ENV DM5 (Development and Biodiversity) states: *“Development schemes shall, in the first instance, seek to achieve a net gain in biodiversity and protect existing habitats on site. They shall also however incorporate elements of biodiversity including green walls, roofs, bat and bird boxes as well as landscape features minimising adverse impacts on existing habitats (whether designated or not). Development schemes shall also be appropriately designed to*

facilitate the emergence of new habitats through the creation of links between habitat areas and open spaces. Together, these provide a network of green spaces which serve to reconnect isolated sites and facilitate species movement.”

Policy SD9 (Biodiversity and Geodiversity) of the **South Downs Local Plan (2018)** states:

“Development proposals will be permitted where they conserve and enhance biodiversity and geodiversity, giving particular regard to ecological networks and areas with high potential for priority habitat restoration or creation. Prior to determination, up-to-date ecological information should be provided which demonstrates that development proposals:

- a) Retain, protect and enhance features of biodiversity and geological interest (including supporting habitat and commuting routes through the site and taking due account of any use by migratory species) and ensure appropriate and long-term management of those features;*
- b) Identify and incorporate opportunities for net gains in biodiversity;*
- g) Comply with the mitigation hierarchy as set out in national policy.*

2. The following hierarchy of site designation will apply in the consideration of development proposals:

- c) Irreplaceable Habitats (including ancient woodland as shown on the Policies Map, and veteran trees): Development proposals which result in the loss or deterioration of irreplaceable habitats, including ancient woodland and veteran trees will be refused unless there are wholly exceptional reasons and a suitable compensation strategy exists”*

SD11 (Trees, Woodland and Hedgerows) states:

- 1. “Development proposals will be permitted where they conserve and enhance trees, hedgerows and woodlands.*
- 2. Development proposals that affect trees, hedgerows and woodland must demonstrate that they have been informed by a full site survey, including an Ecological Survey, Arboricultural Method Statement and associated Tree Protection Plan, and include a management plan.*
- 3. The removal of protected trees, groups of trees woodland or hedgerows will only be permitted in exceptional circumstances and in accordance with the relevant legislation, policy and good practice recommendations. Where protected trees are subject to felling, a replacement of an appropriate number, species and size in an appropriate location will be required.*
- 4. Development proposals must provide adequate protection zones and buffers around hedgerows and other woodland and trees to prevent damage to root systems and taking account of future growth. A minimum buffer of 15 metres will be required between the development and ancient woodland or veteran trees.*
- 5. A proposed loss or damage of non-protected trees, woodland or hedgerows should be avoided, and if demonstrated as being unavoidable, appropriate replacement or compensation will be required.*
- 6. Development proposals must demonstrate that appropriate protection measures are in place prior to any work on site throughout the development process as part of a*

comprehensive landscaping plan, and that suitable opportunities for the restoration, enhancement or planting of trees, woodland, and hedgerows are identified and incorporated.

- 7. Opportunities should be identified and incorporated for planting of new trees, woodlands and hedgerows. New planting should be suitable for the site conditions, use native species and be informed by and contribute to local character, and enhance or create new habitat linkages.”*

Impacts to ancient woodland

Natural England has identified direct impacts of development on ancient woodland or veteran trees including:

- *“damaging or destroying all or part of them (including their soils, ground flora, or fungi)*
- *damaging roots and understorey (all the vegetation under the taller trees)*
- *damaging or compacting soil around the tree roots*
- *polluting the ground around them*
- *changing the water table or drainage of woodland or individual trees*
- *damaging archaeological features or heritage assets”*

The Woodland Trust’s concerns with regard to the proposed relief road focus on the potential direct loss of ancient woodland and veteran trees, depending on the preferred option chosen. Development in ancient woodland can lead to long-term changes in species composition, particularly ground flora and sensitive fauna, i.e. nesting birds, mammals and reptiles. Majorly adverse impacts would occur as a result of the removal of valuable ancient woodland to make way for the construction of this proposal. Many indirect impacts are also likely to occur as a result of the proposed route options, with dust, soil compaction, spillages and waste potentially affecting the woodland, namely during the construction phases but also in the operational use of the roads. These impacts will largely be irreversible and permanent in their nature.

Furthermore, the Trust is concerned that for the remaining woodland, there will be additional impacts of increased noise and light pollution from traffic, as well as dust pollution during construction of the proposal. The woodlands will also be subjected to increased nitrogen oxide emissions from vehicles, which can change the character of woodland vegetation (in terms of species composition) through altering nutrient conditions².

Impacts to veteran trees

Five of the proposed route options are likely to result in the loss or damage to veteran trees. Ancient and veteran trees are a vital and treasured part of our natural and cultural landscape, representing a resource of great international significance. Veteran trees are the ancient trees of the future and in turn notable trees are our future veterans. They harbour a unique

² Sheate, W. R. & Taylor, R. M. (1990) The effect of motorway development on adjacent woodland. Journal of Environmental Management, 31, pp. 261-267

array of wildlife and echo the lives of past generations of people in ways that no other part of our natural world is able.

The impact of each route on veteran trees is as follows (according to the consultation documents provided):

- Cyan (1V5): two veteran trees lost.
- Beige (1V9): two veteran trees lost.
- Magenta (4/5AV1): one veteran tree lost and one veteran tree detrimentally impacted.
- Amber (4/5AV2): two veteran trees lost and five veteran trees detrimentally impacted.
- Grey (5bV1): two veteran trees lost and two veteran trees detrimentally impacted.

Mitigation

Natural England's Standing Advice on Ancient Woodland, states: "*Mitigation measures will depend on the development but could include:*

- *improving the condition of the woodland*
- *putting up screening barriers to protect woodland or ancient and veteran trees from dust and pollution*
- *noise or light reduction measures*
- *protecting ancient and veteran trees by designing open space around them*
- *identifying and protecting trees that could become ancient and veteran trees in the future*
- *rerouting footpaths*
- *removing invasive species*
- ***buffer zones***"

Buffering

Should any of the proposed route options be taken forward that would affect ancient woodland, a buffer zone of **at least 50 metres** should be implemented between the schemes and ancient woodland so as to avoid root damage and construction impacts, and also ameliorate the potentially effects of pollution from the scheme. The buffer should be planted before construction commences on site. A fence should also be put in place during construction to ensure that the buffer area does not suffer from encroachment of construction vehicles/stockpiles etc.

This is backed up by Natural England's Standing Advice which states that "*you should have a buffer zone of at least 15 metres to avoid root damage. Where assessment shows other impacts are likely to extend beyond this distance, **you're likely to need a larger buffer zone.** For example, the effect of air pollution from development that results in a significant increase in traffic.*"

It is also of the utmost importance that any ancient or veteran trees are fully taken into consideration in the routing of the options and are identified going forward to ensure they are appropriately protected.

Natural England’s standing advice states “A buffer zone around an ancient or veteran tree should be at least 15 times larger than the diameter of the tree. The buffer zone should be 5m from the edge of the tree’s canopy if that area is larger than 15 times the tree’s diameter.”

The Trust is concerned that if the protection area is limited, future risk assessments may determine that the tree is a safety hazard and needs to be felled on this basis.

Conclusion

Ancient woodland and veteran trees are irreplaceable habitats, once lost they are gone forever. The Woodland Trust **opposes** all six of the proposed route options due to the unacceptable level of impact on ancient woods and trees.

If you would like clarification of any of the points raised please contact us via campaigning@woodlandtrust.org.uk

Yours sincerely,


 Campaigner – Ancient Woodland

Route	Names of woods affected	Impact	Total area of AW loss from option (Ha)
CYAN - 1V5	Tortington Common / Binsted Woods	LOSS	1.95
	The Waterwoods	LOSS	
	Gobblestubbs Copse	LOSS	
	Unnamed woodland at TQ012069	INDIRECT	
BEIGE - IV9	Tortington Common / Binsted Woods	LOSS	1.09
	The Waterwoods	LOSS	
	Gobblestubbs Copse	LOSS	
CRIMSON 3V1	Tortington Common / Binsted Woods	LOSS	9.2
	Gobblestubbs Copse	LOSS	
MAGENTA - 4/5AV1	Tortington Common / Binsted Woods	LOSS	0.4
	Gobblestubbs Copse	INDIRECT	
	Unnamed woodland at SU973068	LOSS	
	Hundredhouse Copse	INDIRECT	
	Dane's Wood/Great Dean's/West Stubbs Copse	LOSS	
AMBER - 4/5AV2	Tortington Common / Binsted Woods	INDIRECT	1.83
	Unnamed woodland at SU973068	LOSS	
	Hundredhouse Copse	LOSS	
	Unnamed woodland at SU990059	INDIRECT	
	Dane's Wood/Great Dean's/West Stubbs Copse	LOSS	

A14 Arundel Bypass Report on Further Consultation

Appendix E
Further review period letter



Dr. [redacted] Woodbridge
Project Manager
Regional Investment Programme
[redacted] South East
Highways England
Bridge House
1 [redacted] Aln[redacted] Tree Close
Guildford GU1 [redacted]

[redacted] Canary [redacted]

Dear Sir/Madam

**A27 Arundel Bypass
2019 Public Consultation – Corrections**

This letter refers to the options consultation on proposals to improve the A27 at Arundel that took place from [redacted] August to [redacted] October last year. We are currently considering all comments received during the further consultation to help inform the development of the scheme.

If you did not respond to the further consultation last year, this letter does not apply to you. However, if you did respond please read the following information.

As part of our work to collate and review the responses to the consultation, we identified some issues around the way certain pieces of information were presented. Following this, we undertook further reviews of the published documents and identified some errors. Please note that there are no changes to the designs of the six proposed scheme options. No additional baseline data including surveys have been added. The new text only provides corrections to the existing information. Fundamentally, the overall conclusions of the assessment of the various options presented in the consultation materials have not changed.

We wanted to bring this new information to the attention of those people who took part.

In many cases the errors are minor technical corrections (for example, typographical or transcription errors in documents caused by human error) but in some instances, we incorrectly stated the likely effect that an individual aspect (such as noise) would have on a particular scheme option, either positively or negatively changing the impact. To rectify this, we are publishing the corrections to the consultation materials, alongside an explanation as to their effect. We are inviting those who earlier responded to consider these corrections.

We've prepared some documents that set out the errors and how they impact on what we previously said. These documents have been left at deposit points in and around Arundel (locations are detailed below) and they have also been uploaded to our webpage www.highwaysengland.co.uk/arundel. You will find a short explanation of the type of errors we have found at the bottom of this letter.

Please review the information below. If you decide that the type of errors highlighted may have made a difference to the way you responded, we'd recommend that you review the more detailed information we've provided at the deposit points or online. We don't believe that the corrections affect the overall nature of our assessments of the various options. For many of the people who responded to the consultation, it's unlikely that the updated information will have a bearing on

your original views of the options. If your opinions have changed when you read the corrections then we want to ensure you have the opportunity to comment on the latest information.

If you're not concerned about the corrected information and are content it does not impact on your previous response **you don't need to do anything**. You only need to respond to us again now if your views on the proposed options have changed as a result of the corrected information. We will continue to consider all responses we received during the 2019 further consultation.

How to let us know if your opinion has changed

If having reviewed the corrected information you do want to let us know your changed opinion please use our online form available from www.highwaysengland.co.uk/aroundel. You will have the weeks from 1 February until 11.59pm 1 March 2019 to provide your update.

If you have any questions on this letter or any of the documents published correcting the errors then

- **Call us** during normal working hours on 0800 100 0000 asking for the Arundel Bypass project team. Calls will be charged at local rates
- **Email us** at ArundelBypass@highwaysengland.co.uk;
- **Write to us** at Arundel Project Team, Bridge House, Guildford, Surrey GU1 2LJ.

I would like to sincerely apologise for any inconvenience this may cause you.

Yours faithfully



Dr. Woodbridge
Project Manager, Arundel Bypass

Locations to view materials

Location	Address	Opening times
Angmering Library	Arundel Road, Angmering, Littlehampton, BN18 0SS	Monday to Wednesday 10.00am - 04.00pm Thursday to Saturday 09.00am - 01.00pm Sunday Closed
Arundel Town Hall	Maltravers Street, Arundel, BN18 9AP	Monday to Friday 09.00am - 01.00pm
Arundel Library	Strey Street, Arundel, BN18 9DT	Monday to Wednesday 10.00am - 04.00pm Thursday to Saturday 09.00am - 01.00pm Sunday Closed
Bognor Regis Library	09 London Road, Bognor Regis, PO1 1DE	Monday 09.00am - 04.00pm Tuesday to Thursday 09.00am - 04.00pm Friday to Saturday 09.00am - 04.00pm Sunday Closed
East Preston Library	The Street, East Preston, Littlehampton, BN1 100	Monday to Wednesday 10.00am - 04.00pm Thursday to Saturday 10.00am - 04.00pm Sunday Closed
Littlehampton Library	Maltravers Road, Littlehampton, BN1 0NA	Monday 10.00am - 04.00pm Tuesday to Thursday 10.00am - 04.00pm Friday 10.00am - 04.00pm Saturday 10.00am - 04.00pm Sunday Closed
Rosington Library	Claigmar Road, Rosington, Littlehampton, BN1 0NL	Monday to Friday 10.00am - 04.00pm Saturday 10.00am - 04.00pm Sunday Closed

Summary of the errors identified in the further consultation materials

What documents are affected?

- We have identified errors that need to be corrected in the following documents¹:
- The Public Consultation Brochure
 - The Environmental Assessment Report (EAR)
 - The South Downs National Park Special Qualities Assessment (Appendix 11 of the EAR)
 - The Interim Scheme Assessment Report (SAR) including SAR Appendix F Appraisal Summary Tables (ASTs)
 - The Moring and Lancing Sensitivity Technical Note
 - The Combined Modelling and Appraisal (ComMA) Report
 - Local Roads Study

What topics are affected?

The majority of changes affect the environmental topics contained within the cultural heritage, landscape and visual biodiversity and noise and vibration chapters. A few changes affect the population and health chapters as well as the road drainage and the water environment and climate change (greenhouse gases and amenability) chapters. No updates were required for the air quality, materials, geology and soils or major accidents and disasters environmental topics.

In many instances the corrections are replicated in the other documents (e.g. the Public Consultation Brochure and the Interim SAR) and the summaries that draw information from the EAR chapters. In addition a few minor changes affect the Local Roads Study and ComMA.

¹ Available at www.highwaysengland.co.uk/arundel

What are the changes?

The majority of changes are relatively minor technical corrections. Such as correcting the number of properties that would experience a moderate or greater noise level increase during the operational phase from 9 to 11 for Crimson Option 1.

There are however some corrections to the level of significance of effect reported on a particular topic. In general these relate to a specific element of an environmental topic for a specific Scheme option. Such as existing dwellings at **Fitzalan Road** would also experience significant adverse noise effects during Operation for Magenta Option 1/A1.

To ease the understanding of the cultural heritage chapter and some of the biodiversity appendices due to multiple recurring corrections we have reissued these documents in their entirety. The overall conclusions of the environmental assessment have not changed.

A14 Arundel Bypass Report on Further Consultation

Appendix F
Further review period online
response form questions

Further review period online response form questions

Q1 Did you respond to the A14 Arundel Bypass Further Consultation that took place from August 2019 to October 2019?

Q2 Please provide your postcode. This will only be used to inform our analysis of responses

Q3 Have the corrections changed your views on any of the proposed options?

Q4 Which was your preferred option before the corrections were published if all options are brought into an affordable range?

Q5 No that you are aware of the corrections which is your preferred option if all options are brought into an affordable range?

Q6 Which was your least preferred option or last choice before the corrections were published if all options are brought into an affordable range?

Q7 No that you are aware of the corrections which is your least preferred option or last choice if all options are brought into an affordable range?

A14 Arundel Bypass Report on Further Consultation

Appendix G
Further review period poster for
deposit points

Further review period: 3 February to 1 March 2020

Did you take part in the consultation around proposals to improve the A27 at Arundel, that took place last year, from 30 August to 24 October? If yes, please be aware we're holding a further review period from 3 February until 1 March 2020.

You may want to take part in this.

Why?

In looking at the responses to last year's consultation, and having completed a thorough review of all the materials that we produced, we identified some issues with the way that some information was presented.

To correct this, we've published some 'errata documents' which outline the corrections we've made, and the impact of them. They affect the following documents:

- Public Consultation Brochure
- Environmental Assessment Report (EAR)
- South Downs National Park Special Qualities Assessment (Appendix 1-1 of the EAR)
- Interim Scheme Assessment Report (SAR) including SAR Appendix F - Appraisal Summary Tables (ASTs)
- Worthing and Lancing Sensitivity Technical Note
- Combined Modelling and Appraisal (ComMA) Report
- Local Roads Study

What should you do?

- Log onto www.highwaysengland.co.uk/A27Arundel or
- Look out for a letter that is being sent out locally – this explains what is happening and why, and what you may need to do, or
- Review the information that has been left at one of the **deposit points**

If you decide that the changes DO affect the response you previously gave, then you should fill in the online form available at www.highwaysengland.co.uk/A27Arundel

Hard copies of the form can be requested by calling **0300 123 5000** (asking for the Arundel Bypass project team). Calls will be charged at local rate.

Deposit points

Angmering Library

Arundel Town Hall

Arundel Library

Bognor Regis Library

East Preston Library

Littlehampton Library

Rustington Library

For more information about the A27 Arundel Bypass project:

- **Call us** during normal working hours on **0300 123 5000**
- **Email us** at A27ArundelBypass@highwaysengland.co.uk
- **Write to us** at A27 Arundel Project Team, Bridge House, Guildford, Surrey, GU1 4LZ

A14 Arundel Bypass Report on Further Consultation

Appendix H
Further review period code
descriptions with associated
frequencies from analysis

Further review period full frequency codes

Responses = number of coded comments

Code	Responses
Concerns on the consultation process	100
There's still misleading/incorrect/missing information	109
Refrain the consultation	100
Errors presented in a confusing way	100
Support the Arundel Alternative/Provide single carriage way	101
Concern about impact on climate change	110
Concerns about impact on biodiversity/habitats/wildlife/woodlands	108
Previews consultation was inadequate	101
Concerns about the effect on towns/villages/communities	98
Not everyone who responded previously has been notified	90
Support Do nothing/Oppose scheme	80
Discouraging people from responding	80
People don't remember what information they used to come to their conclusions	00
Concerns about impact on landscape/visual	00
Concerns about impact on air quality	00
Waste of money/too expensive	08
Will increase traffic/congestion/new roads create more traffic	00
Support for Magenta Option 1/A11	00
Need to improve/invest in public transport/walking/cycling facilities	01
Comments unrelated to the consultation	01
Concerns about impact on ancient woodland	09
Concerns about impact/destruction of land/properties	09
Preferred option hasn't changed following review of errata documents	09
Concerns about impact on cultural heritage/ancient buildings	08
Opposition for Magenta Option 1/A11	00
Opposition for offline	01
Alternative route/design suggestions	19
Concerns regarding assessment methods	10
Concerns about impact on the South Downs National Park	10
Concerns about noise pollution	10

Only a small journey time saving	1
Concerns about increased flood risk/impact on flood plain	11
Must get on with it/taking too long	9
Will not improve traffic/congestion	8
National planning policy needs to be reconsidered	8
Support for Crimson (Option 11)	0
Support for Beige (Option 19)	0
Support for Cyan (Option 10)	0
Opposition for Grey (Option B1)	0
Support for online	0
Mitigation suggestions	0
Opposition for Amber (Option 7/A)	0
Support lower cost solution	0
Opinions in general have not changed following review of errata documents	0
Concerns regarding programme/timing of assessments	0
Opposition for Crimson (Option 11)	0
Concerns about impact on non-motorised users	0
Concerns about impact on economy	0
Concerns about impact on businesses	0
Concerns about impact during construction	0
Additional committees suggested	0
Opposition for Cyan (Option 10)	1
Opposition for Beige (Option 19)	1
Opposition for online	1
Support for offline	1
Least preferred/worst option hasn't changed following review of errata documents	1
Organisation introduction to services/mission statement	1
Support for Amber (Option 7/A)	0
Support for Grey (Option B1)	0
Less impact on biodiversity/habitats/wildlife/woodlands	0
Less impact on ancient woodland	0
Less impact on the South Downs National Park	0
Less impact on air quality	0

Less impact on climate change	<input type="checkbox"/>
Less concerns about landscape/visual	<input type="checkbox"/>
Less impact on cultural heritage/ancient buildings	<input type="checkbox"/>
Less impact on NMAs	<input type="checkbox"/>
Will improve traffic/congestion	<input type="checkbox"/>
Less impact on towns/villages/communities	<input type="checkbox"/>
Less impact on economy	<input type="checkbox"/>
Less impact on businesses	<input type="checkbox"/>
Less impact during construction	<input type="checkbox"/>
Preferred option has changed following review of errata documents	<input type="checkbox"/>
Least preferred/worst option has changed following review of errata documents	<input type="checkbox"/>
Opinions in general have not changed following review of errata documents	<input type="checkbox"/>
Oppose the Arundel Alternative/Provide single carriage way	<input type="checkbox"/>