

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

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Appendices

0. A27 Arundel options
1. A27 Arundel SDNPA Timeline
2. Position Statement for Major Projects
3. Defra family single voice letter

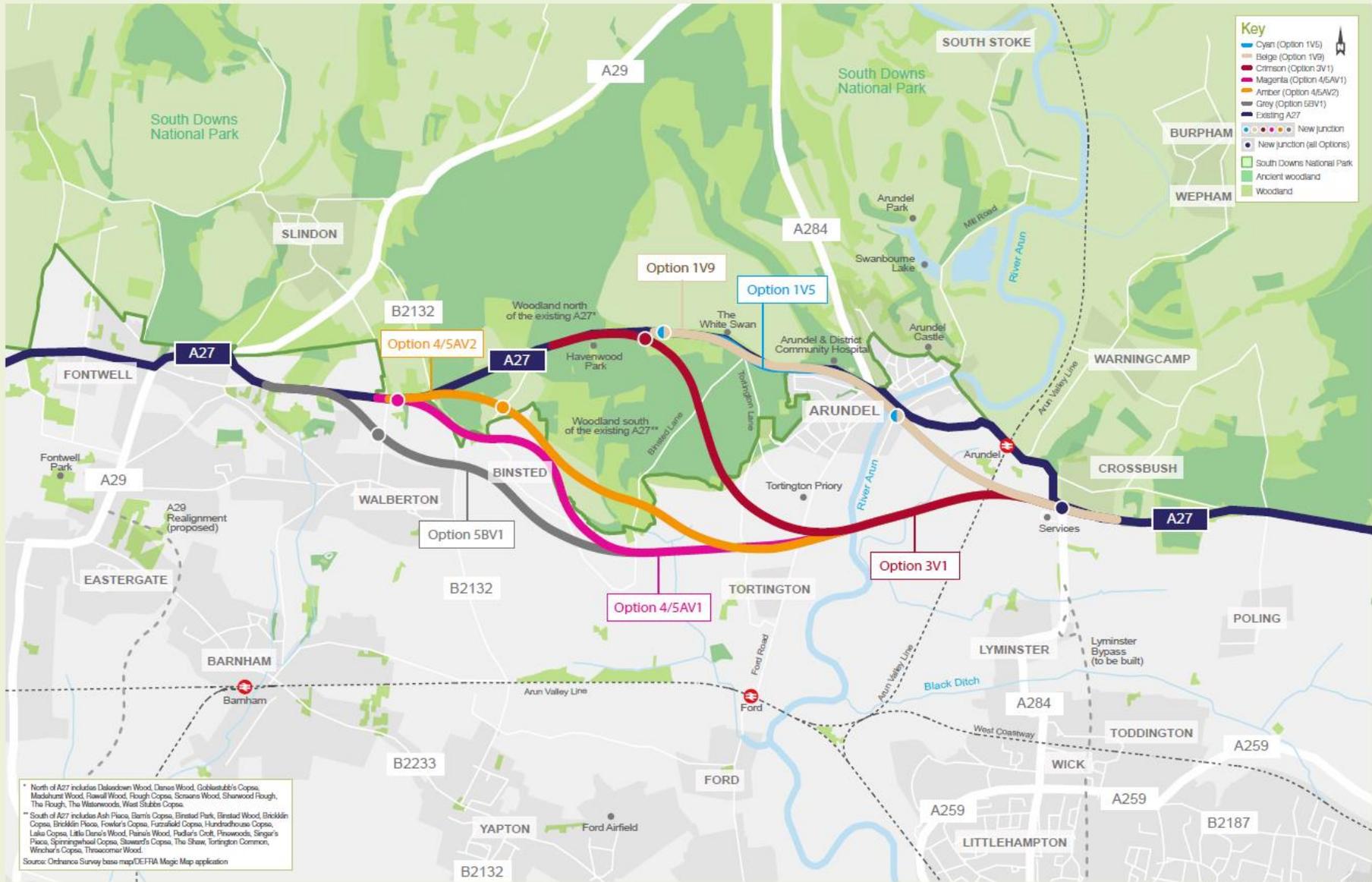
SDNPA Consultees

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



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

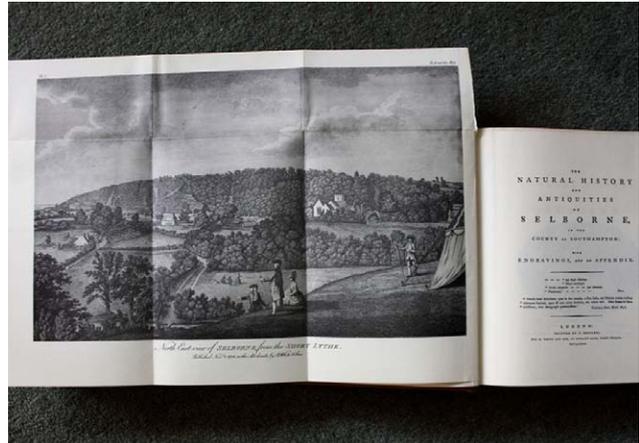


Butser Ancient Farm, Chalton, Hampshire

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,



Colette Heggie, Environment Planning and Engagement Manager, Environment Agency



Partnership and Expertise Manager South East, Forestry Commission



Sue Beale, Kent & Sussex Manager, Natural England



Andrew Lee, Director Countryside and Policy, South Downs National Park Authority

² <https://www.gov.uk/government/speeches/beautiful-roads>