

**Agenda Item 13b**  
**Report PRI7/17**

Report to	<b>Policy &amp; Resources Committee</b>
Date	<b>19 September 2017</b>
By	<b>Countryside and Policy Manager – Wealden Heaths</b>
Title of Report	<b>Response to Highways England Consultation for route options for the proposed A27 Arundel By Pass</b>

**Recommendation: The Committee is recommended to:**

- 1. Agree that Members and appropriate officers continue to be engaged with the specific consultation and technical groups that Highways England (HE) have set up, to ensure NP purposes are fully represented**
- 2. Note the evidence provided to date on the impacts on the SDNP Special Qualities of the 3 route options which have been presented for consultation by Highways England which demonstrates that all 3 of the route options cause permanent and irreversible damage to the SDNP**
- 3. Support the proposed objection to all three schemes on the basis of the evidence so far provided**
- 4. Agree that, regardless of which route is selected for the preferred option, SDNPA should continue to work with Highways England and other stakeholders to achieve appropriate mitigation and compensatory measures**
- 5. Endorse officers continue working with HE to ensure HE's nationally designated funds are utilised for maximum benefit locally**
- 6. Delegate to the Director of Countryside Policy and Management - in consultation with the Chair of the P&R Committee and the Authority Chair - to prepare a response to the Highways England Consultation for approval by the NPA**

**I. Summary and Background**

- I.1. Members will recall the background and discussions which led to the adoption of the SDNPA 'Position Statement' as the basis for responding to proposed road schemes for the A27 (Arundel, Chichester, Worthing & Lancing, East of Lewes) at the 23 September 2014 SDNPA meeting, see **Appendix I**.
- I.2. Members will also recall that at the Part 2 discussions of the SDNPA meeting of 1 December 2015 an approach was agreed to collect information on the impacts of these schemes on the Special Qualities to inform our response to the consultation by Highways England (HE) and their consultants.
- I.3. Officers have subsequently gathered evidence and commissioned research which is contained or linked within the appendices with regards to the proposed bypass scheme for Arundel to help Members form a view and assess the impacts.

- 1.4. Members also requested that the impacts of the four schemes at Chichester, Arundel, Worthing and east of Lewes should be assessed as to their cumulative impact on the economy of the SDNP at a high level.
- 1.5. The subsequently commissioned economic report by Steer Davies Gleave was published in March 17, and the consultants provided some early results for the SDNPA at the end of November in advance of the final report and in time to guide the SDNPA response for the proposals east of Lewes, and a Member workshop was held pre P&P in Feb 17 to help shape the final report. This is attached as **Appendix 8** to this report.
- 1.6. Members will recall the workshop session on 18<sup>th</sup> May 2017 when a site visit to key locations along the route options for Arundel was undertaken by members and officers to consider the range of positive and negative impacts which the 3 route options present. The table in **Appendix 11** (Table of impacts on the SDNP Special Qualities) sets out this information in summary form and relates the SDNP Special Qualities to the Environmental Impact Assessment subject areas.
- 1.7. Highways England presented their route options and were available for a Q&A session at the Members Development Day on 8<sup>th</sup> Sept 2017, and afterwards members debated the issues privately which have helped shape this report

## 2. Current Situation

### Highways England Consultative/Steering group structure

- 2.1. Throughout the process HE and their consultants have engaged with stakeholders in a variety of ways. This includes talking to key stakeholders behind the scenes, formal stakeholder events, and different levels of officer/member groups.
- 2.2. The assessment of impacts to date by Highways England (HE) has been carried out in accordance with the *Highways Design Manual for Roads and Bridges* (DMRB) process and is not a full Environmental Impact Assessment (EIA). In accordance with the work stages set out in DMRB the full EIA will not be prepared until the preferred option for the scheme has been selected.
- 2.3. The following assessment is therefore based on the information made available to the SDNPA which is included in the consultation document released by HE on 22nd August 2017 and other material provided at various stakeholder meetings prior to this. Further detailed assessment of the detailed design of the scheme at the preferred option stage in the future will be undertaken by SDNPA in order to refine this early impact assessment of options and identify appropriate mitigation.
- 2.4. The SDNPA involvement for the scheme at Arundel has involved;
  - a Steering Group for directors or their deputies
  - a Focus Group for officers and communications teams
  - a Technical Working Group for officers
  - Key Stakeholder workshops
  - General stakeholder workshops
- 2.5. The focus of the SDNPA discussions with HE and consultants at Arundel has been on;
  - The direct impacts on the Special Qualities of the SDNP, both within the National Park and also in its setting;
  - Discussions around the impact and interplay of the route options on the setting of the Castle/Cathedral and the setting of the SDNP
    - Improving accessibility for non-motorised users (NMU) alongside and across the A27 to access the SDNP
    - Journey time reliability, accident records and speed limits

- National Planning Policy 115 and 116<sup>1</sup> and the National Network Planning Policy Statement<sup>2</sup>— (that road building should be avoided in National Parks unless no alternatives)

### **3. SDNPA position and draft response to the Highways England Consultation**

- 3.1. Pending legal advice the following response is proposed in draft with confirmation of the wording to be considered at the forthcoming National Park Authority meeting on the 19<sup>th</sup> October;

SDNPA objects to all 3 scheme proposals on the basis that:

- 3.2. All 3 scheme options are considered to fail the major development test set out in the NPPF (para 116) and the National Network National Planning Policy Statement (paras 5.150 – 5.155)
- 3.3. An alternative scheme which is technically and physically achievable and does not lie within the SDNP has been discounted from the route option consultation on the grounds of costs. These costs have not been fully disclosed (ref NPPF para 116 & NNNPS para 4.26)
- 3.4. Insufficient information has been provided with which to properly assess the proposals in terms of;
- Transparent costings which identify the costs of alternative route options outside the SDNPA; identify the budget or costs for mitigation measures for all schemes; identify capital and revenue costs for compensatory habitat establishment, maintenance and long term management thereby undermining any conclusions which could otherwise be made about the financial implications of the route selection process ;
  - The feasibility of the compensatory habitat measures required for loss of Ancient woodland (howsoever defined);
  - Mitigation of impacts – the significant and extensive mitigation measures have not been identified to enable an assessment of the suitability of measures proposed nor included in the costings of the route options for comparison;
  - Lack of clarity about the structure which would form the valley crossing for route options 3 & 5A in terms of design, costings and buildability, both options having significant and differing impacts on the Special qualities of the SDNP;
  - The implications of the proposed valley crossing for all options on the upstream (SDNP) riparian environment and function;
  - Unassessed impacts on the Amberley Wildbrooks SPA in terms of air pollution and the water environment;
  - The impacts and duration of the construction process on SDNP;
  - The process for sourcing, moving and storing the large amounts of fill required to build the causeway embankments for all options including removing existing soils down to firm ground and the duration of these operations;
  - The impact of the route options on traffic movements through the National Park beyond the immediate study area both separately and in cumulative effects with the other A27 schemes (EOL, Worthing, Chichester);
  - The impact of the route options on the recently discovered Chichester to Arundel Roman Road.

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<sup>1</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/60772/116950.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/60772/116950.pdf)

<sup>2</sup> <https://www.gov.uk/government/publications/national-policy-statement-for-national-networks>

#### 4. Planning Considerations

- 4.1. It is understood that the application for the A27 Arundel Scheme will be made through the National Infrastructure Planning process which is undertaken by the Planning Inspectorate (PINS) on behalf of the Secretary of State. The National Park Authority would be considered to be a 'relevant' Local Authority in this process and will be invited to produce a *Local Impact Report*<sup>3</sup> to submit to PINS for their consideration during the application process.

##### National Policy Statement for National Networks (NNNPS)

- 4.2. This is the planning policy document which sets out planning guidance for the development of national significant infrastructure projects on the road and rail networks. The Secretary of State will use the NNNPS as the primary basis for making decisions on development consent applications for National Infrastructure projects.
- 4.3. *Paragraph 1.18 of the NNNPS highlights that the National Planning Policy Framework (NPPF) is also an important consideration in the decision making of nationally significant infrastructure projects. The relevant paragraphs in the NPPF are set out in more detail below.*
- 4.4. The following paragraphs of the NNNPS specifically refer to development within National Parks and are particularly relevant in the decision making process for any A27 Arundel Scheme:
- 4.5. Para 4.26 Refers to the assessment of alternatives for schemes within a National Park.
- 4.6. Para 5.148 Assessment process refers to the need for applicants to adhere to the requirements of the Government circular 2010 on the 'English National Parks and the Broads'<sup>4</sup> or successor documents.
- 4.7. Paras 5.148-5.155 Sets out the approach to the tests for major road schemes within National Parks.

##### National Planning Policy Framework (NPPF)

- 4.8. In light of paragraph 1.18 of the NNNPS, it is considered that the following paragraphs of the National Planning Policy Framework (NPPF) are also relevant:
- *Paragraph 17 sets out the broad planning principles in plan and decision making. These encourage the delivery of multiple benefits from land use in both rural and urban areas including reference to ecosystem service functions such as flood mitigation, carbon storage and provisioning services such as food and fuel.*
  - *Paragraph 109 recognises that value and wider benefits of ecosystem services and requires that the planning system contribute to their enhancement and protection.*
  - *Paragraph 114 requires that Local Plans should take a strategic approach and plan positively for the creation, protection, enhancement and management of networks for biodiversity and green infrastructure.*
  - *Paragraph 115 states that great weight should be given to conserving landscape and scenic beauty, wildlife and cultural heritage in National Parks, the Broads and Areas of Outstanding National Beauty*
  - *Paragraph 116 planning permission should be refused for major development except in exceptional circumstances and where it can be demonstrated to be in the public interest*
  - *Paragraph 117 states that planning policies should contribute to the promotion of coherent ecological networks.*

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<sup>4</sup> <https://www.gov.uk/government/publications/english-national-parks-and-the-broads-uk-government-vision-and-circular-2010>

- Paragraphs 126- 141 set out the approach to the conservation and protection of heritage assets
- 4.9. The construction of a major trunk road through the National Park (Options 3 & 5A) would clearly constitute major development and it is likely that the on-line widening, and new alignment of Option 1 within, and in the setting of the SDNP would also constitute major development.. Therefore, the 3 proposed Options would need to meet the requirements of paragraph 116 of the NPPF and paragraph 5.151 of the NNNPS which state that the Secretary of State should refuse development consent in these areas (i.e. National Parks) 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 permitting it, or refusing 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.
- 4.10. It is likely that all of the 3 options which have been presented for consultation do not meet the national planning policy tests for major development within the National Park due to the unacceptable impacts on the SDNP, its setting and the irreplaceable features which would be lost as a result of the proposals. This is acknowledged by Highways England in the consultation documents.

## 5. Impacts on the Special Qualities of the SDNP

- 5.1. Notwithstanding and without prejudice to the SDNPA's objection to all 3 route options as set out above, the following assessment work has been undertaken to fully understand the impacts on the special qualities of the SDNP,
- Landscape and visual impacts,
  - Tranquillity,
  - Access and PROW network
  - Biodiversity
  - Archaeological/Cultural heritage
  - Economy
  - Ecosystem Services

The summary findings of these assessments is set out below, the full reports for each subject are included in the **Appendix 11** which accompany this report.

The relationship between the SDNP special qualities and the Environmental Impact Assessment subject areas is set out in the table in **Appendix 11**.

## 6. Potential effects on Landscape, Dark night skies and Tranquillity (Appendix 4iv &4ii)

### Description

- 6.1. SDNP have appointed consultants to undertake an assessment of the Landscape and Visual impacts of the route options for the A27 Arundel scheme This work has been carried out in advance of the public consultation for the scheme in order that the authority is well informed about the likely effects of the various options as the schemes are developed in more detail. At this stage our consultants have been working on outline design drawings which are not full scheme designs. Therefore these are to be regarded as interim conclusions based on the information available at this time.
- 6.2. The following sections of this report outlines the conclusions of the various specialist assessments at this stage.

### Background information regarding the SDNP and the landscape of Arundel

- 6.3. The A27 around Arundel was the subject of a number of improvements in the later 20<sup>th</sup> century. A by-pass road was constructed between 1973 and 1974 that crosses the Arun and its floodplain to the south of the town before linking up with A284, which was also constructed at this time. The road at the far eastern end of the Study Area was converted into a dual carriageway between 1992 and 1993 with provision to extend this road westwards along what is currently the proposed Pink Route (option 3).

### Designation of the South Downs National Park

- 6.4. The inclusion of land surrounding Arundel within the proposed South Downs National Park (PSDNP) was considered in some detail during the public inquiry into the designation of the National Park. The inspector considered a number of proposed modifications to the PSDNP boundary by a number of responders including the South Downs Society, the Countryside Agency and Highways Agency. Excerpts of the inspector's report from the inquiry which describe his conclusions about how the landscape around Arundel satisfies the designation criteria (or not) and the subsequent proposed boundary alignment for the PSDNP are included at **Appendix 3**. It is noted that at the time of the designation process following the Secretary of State had withdrawn support for the proposed Arundel By pass -the Pink/blue route (now called option 3) due to its environmental impacts.

### Landscape Character Description

- 6.5. Arundel holds a commanding defensive and controlling position at the head of the Arun river valley at the point where the river Arun cuts through the South Downs and out onto the coastal plain before joining the English Channel at Littlehampton. The catchment of the Arun extends further north towards Horsham some 25 miles away. The river valley is a major physical feature which is in part within the SDNP but extends beyond the SDNP boundaries to the north and south, where the topography and meandering alignment of the river valley and views towards the SDNP are distinctive and defining features of the surrounding landscape.
- 6.6. There are far reaching views towards Arundel in all directions from the surrounding valley, valley sides, coastal plain and downland. To the north of Arundel the river valley which cuts through the chalk downland is lush and pastoral in character with ecologically important flora. The south facing upper coastal plain/footslopes of the South Downs are well wooded to the west and east. To the north of Arundel the downland and Arun valley is heavily wooded to the west and more arable and open to the east.
- 6.7. The existing A27 route going west to east runs along the northern edge of Binsted wood in the upper coastal plain before descending the Arun valley side to the south of the historic core of Arundel, and to the north of more recent settlement expansion to the south of the road which is located on the Arun valley side. The road crosses the valley at a narrow point south of Arundel before ascending the eastern valley side in a sinuous alignment up to Crossbush high on the eastern valley side.
- 6.8. Surrounding hedgerows and woodland provide some screening for the existing A27 and are well established. The existing road is well screened from the SDNP and were it not for the visible movement of traffic, the road would largely be overlooked. The flat valley floor and floodplain is periodically waterlogged. Field patterns within the valley are often defined and bounded by ditches – known as 'innings' where land has been reclaimed from the floodplain marshes. The innings are often medieval.

### Experiential and cultural qualities

- 6.9. The South Downs integrated character assessment (SDILCA) identifies the landscape surrounding Arundel as being deeply rural and tranquil, The landscape framework of valley, downland and coastal plain is large scale with far reaching views although there is a sense of enclosure, tranquillity and time depth in much of the landscape away from roads and settlements. A network of rural roads and historic villages and hamlets along the wooded upper coastal plain and the river valley sides contributes to the sense of time depth and rural

quality of the landscape. The river valley has long been used as a route through the downs between the Weald and the sea. The public rights of way network is extensive although the A27 acts as a significant barrier to north/south movement along the boundary of the SDNP. The river valley floor is a largely still landscape where the floodplain has prevented development. The landscape of the floodplain is predominantly pastoral and tranquil.

#### Landscape Sensitivity and forces for change

- 6.10. The large scale of the landscape combined with far reaching views and undulating topography makes the landscape visually sensitive despite its wooded character to the west. The valley sides and crests are particularly so. The rural character of the local road network is vulnerable to 'improvements' where highway infrastructure would urbanise and erode rural qualities. The river valley is sensitive to development due to the long views possible along the valley floor and the sense of stillness and tranquillity which surrounds the course of the river.

#### Landscape impacts for the route options

##### Option I

- 6.11. The Option I route can be considered in 2 distinct sections:- the western half (on the existing alignment of the A27), and the eastern half (on a new alignment).
- 6.12. The western part of option I is on the existing alignment of the A27 and is considered to be unlikely to have significant adverse implications for the SDNP or for upholding its Statutory Purposes owing to the existing alignment of the road and its associated impacts (noise, severance, visual intrusion). The majority of potential effects on the assessed landscape and visual receptors relating to the western part of option I were found to be 'neutral'.
- 6.13. However, widening of the existing road would require the removal of existing roadside vegetation, including 5.5 ha of ancient woodland which is irreplaceable habitat. This would be significantly detrimental to the landscape experience, through this loss of habitat within the SDNP and in addition by exposing receptors within the woodland to increased movement of vehicles and road noise as a result.
- 6.14. The eastern part of option I from the River Arun to Crossbush, is within the setting of the SDNP
- 6.15. The eastern part of option I is considered to have far reaching implications for the landscape and visual context of the SDNP; the effects on the Arun valley floor, and the valley side near Crossbush are of particular note.
- 6.16. The creation of an elevated section of highway, approximately 925m in length, traversing the eastern lower valley side, would require embankments reaching 8.3m at the highest point. The top of this feature would have a gentler grade than the natural surrounding topography, and therefore be fundamentally contrary to the natural valley side landform, projecting further into the flat valley floor, interrupting its continuous expanse between the railway (in the south at Ford and the east between Arundel junction and Arundel station) and the town of Arundel.
- 6.17. This physical change would have implications for the experience of far reaching views towards the chalk downs and Arundel. As-such, there is potential for this landscape change within the setting of the SDNP to compromise the special qualities of the SDNP landscape.
- 6.18. The physical and experiential changes associated with the proposed road improvement option I would have implications for the appreciation of landscape components which are contiguous between the valley floor on either side of the SDNP boundary, (e.g. the flat topography, permanent pasture, and far reaching views) and the valley sides on either side of the SDNP boundary (e.g. the tranquil, rural setting of undulating farmland and woody field boundaries). As-such, there is potential for this landscape change within the setting of the SDNP to compromise the special qualities of the SDNP landscape.
- 6.19. Although the downgrading of the road along the existing alignment of the A27 could be regarded as a positive intervention locally, the intrusion of vehicle movement and road

noise would merely be displaced further south rather than reduced altogether. Whilst this could be regarded as slightly beneficial for the valley floor and valley sides within the SDNP to the north of the existing A27, the equivalent landscape character areas within the setting of the SDNP (to the south of the existing A27) would not experience that benefit and both roads would remain in use, thereby extending the range of impacts in the location.

### Route Option 3

- 6.20. The Option 3 scheme would have far-reaching implications for the SDNP. The effects on the Arun Valley and Binsted Wood / Tortington Common are of particular note.
- 6.21. The creation of a causeway approximately 2km in length, stretching across the width of the lower Arun Valley floor from the arable fields south of Priory Farm, Tortington (in the west) to the pastoral fields south of Priory Farm, Crossbush (in the east), would fundamentally change the key characteristics of the flat valley floor, and would compromise the special qualities of the SDNP landscape. This change as experienced from within the SDNP would read as an intrusion within a previously continual landscape character. This would affect both the setting and the SDNP Special Qualities to a significant degree.
- 6.22. Although the downgrading of the road along the existing alignment of the A27 could be regarded as a positive intervention locally, the intrusion of vehicle movement and road noise would merely be displaced further south rather than reduced. Whilst this could be regarded as slightly beneficial for the valley within the SDNP to the north of the existing A27, the valley within the setting of the SDNP (to the south of the existing A27) would not experience that benefit. It is noted that the existing A27 would still be used by traffic from Arundel and from Ford in order to gain access to route options 3 & 5a. which would further erode any benefit of downgrading this section of the existing A27.
- 6.23. A long section of the proposed road improvement option 3 passes through part of Tortington Common / Binsted Wood, within the SDNP, stretching approximately 1900m from the woodland edge where it abuts an agricultural field just east of Tortington Road, to the driveway leading to Havenwood Park caravan site, just off the existing A27 at the northern edge of the wood. Near to its northern extent a relatively short section of the proposed road re-alignment would emerge from the woods into a pastoral field.
- 6.24. Certain assumptions have had to be used in assessing this part of the road improvement route, since technical details have not been provided. However, the route alignment is known, and therefore it is possible to say that the proposed road would cut through continuous and successive woodland compartments along almost all of this section, of which all compartments are registered on the Natural England inventory as ancient replanted woodland. It is assumed that the proposed road would be constructed approximately at grade, extending through the woodland's gently undulating topography, with numerous meandering drainage ditches. The woodland broadly consists of coniferous plantation, and a understorey with a particular wealth of flora and fauna all contributing to an interesting and varied landscape experience. The woodland is well served by public footpaths, bridleways and rural lanes, all of which provide opportunities for recreation. In particular Old Scotland Lane (a bridleway) is particularly noteworthy, as an ancient trackway. The landscape experience throughout the woodland on the PRow / rural lane network is one of deep seclusion.
- 6.25. The potential movement of vehicles and road noise have clear implications for enjoyment of the scenic value of the woodlands and adjacent pastoral landscape, (eroding the sense of deep seclusion / tranquillity). Aside from experiential changes, the proposed road improvement option 3 would have inevitable physical implications, including the loss of ancient woodland (extending to approximately 24ha).
- 6.26. It is not known what the nature of the interface between the various PRow's and rural lanes with the proposed A27 would be. The proposed road alignment crosses 3 public footpaths, a bridleway and a rural lane. This is likely to impede the use of these recreational routes, or sever them altogether, with adverse consequences for the wider network of these routes



throughout the woodland, and erosion of the otherwise good public access that is considered to be a key baseline component.

- 6.27. Although the downgrading of the road along the existing alignment of the A27 could be regarded as a positive intervention locally, with regards to Binsted Wood / Tortington Common as a whole the intrusion of vehicle movement and road noise would merely be displaced further south rather than reduced. Any physical changes along the alignment of the existing A27 are unlikely to have notable implications for Binsted Wood / Tortington Common. It is noted that the existing A27 would still be used by traffic from Arundel and from Ford in order to gain access to route options 3 & 5a.

#### Route Option 5A

- 6.28. The Option 5A scheme would have implications for the SDNP and its setting. The effects on the Arun Valley and farmland to the south of Binsted Wood / Tortington Common are of particular note.
- 6.29. The creation of a causeway approximately 2km in length, stretching across the width of the lower Arun Valley floor would fundamentally change its key characteristics by interrupting its continuous expanse between the railway (in the south at Ford and the east between Arundel junction and Arundel station) and the town of Arundel. This physical change significantly affect the far reaching views towards and from the chalk downs and Arundel, both within and in the setting of the SDNP due to the continuous and undeveloped landscape character of the river valley.
- 6.30. Although the downgrading of the road along the existing alignment of the A27 could be regarded as a positive intervention locally, the intrusion of vehicle movement and road noise would merely be displaced further south rather than reduced. Whilst this could be regarded as slightly beneficial for the valley within the SDNP to the north of the existing A27, the valley within the setting of the SDNP (to the south of the existing A27) would not experience that benefit.
- 6.31. Through the northern part of the agricultural landscape at Tortington, Binsted and Walberton (around Binsted Park) is partly within the SDNP, and partly outside the SDNP but very close to its boundary and clearly within its setting. Here, the Option 5A scheme proposes a sequence of 3 sections of highway elevated on embankments and 2 sections of highway in cuttings. The vertical alignment of the carriageway would be 10.8m higher than the surrounding natural topography at the highest point, and 8.3m lower than the surrounding natural topography at its lowest point. The footprint of this sequence of embankments and cuttings would also require clearance of several parts of woodlands, (including a substantial area of registered Ancient Woodland at Barn's Copse / Hundredhouse Copse / Little Danes Wood), along with several tree belts, and field boundary hedgerows.
- 6.32. These physical and experiential changes associated with the proposed road improvement option 5A would impacts significantly on the SDNP and it's setting. The movement of vehicles and road noise introduced into this landscape can be regarded as an erosion of the high degree of tranquillity and stillness that are noted as a key features of the area. This would be exacerbated by the source of the intrusion (i.e. traffic) being at close range to users of the PROW network. As-such, there is significant potential for this landscape change within the setting of the SDNP to compromise the special qualities of the SDNP's landscape.
- 6.33. Downgrading the road along the existing alignment of the A27 (north of Binsted Wood / Tortington Common within the SDNP) could be regarded as a positive intervention locally. As the volume of traffic would be notably reduced, the degree of intrusion from vehicular movement / road noise would also reduced. Similarly, the reduction in the quantity of vehicles in this part of the view composition could be regarded as a positive visual change. It is noted however that the existing A27 would still be used by traffic from Arundel and from Ford in order to gain access to route options 3 & 5a. which would moderate any positive effects experienced.

- 6.34. Assessing the baseline landscape and visual conditions observed in the field has confirmed that changes to the key landscape visual components as a consequence of route Option 5A would be felt most adversely by receptors within the Arun Valley and within the agricultural landscape at Tortington, Binsted and Walberton (around Binsted Park)

#### Tranquillity

##### Route option 1

- 6.35. There is potential for a minor improvement in tranquillity experienced along the Monarch Way within the river valley in the SDNP owing to the A27 being moved away from the SDNP boundary and the resulting reduction of impacts from noise and movement., However this benefit would be likely countered by the elevation of the new road crossing (8m) which would increase the visibility, movement and noise of vehicles albeit at a greater distance. This would also result in two road corridors within and in the setting of the the SDNP where currently there is only one, thus spreading the associated negative effects on tranquillity over a wider area.

##### Route option 3 -

- 6.36. There would be significant negative impacts on tranquillity within both Tortington and Binsted Woods in the SDNP due to the introduction of the road within the woods.
- 6.37. There would be significant negative impacts on tranquillity within the floodplain in the setting of the SDNP due to visible and audible movement of traffic across the still, quiet and essentially medieval landscape of the river valley in the setting of the SDNP. This would affect receptors both within and in the setting of the SDNP.
- 6.38. There is potential for a minor local improvement in Tranquillity along the section of the A27 to be downgraded east of the new junction at Paines Wood. However, this would be likely to be countered by the continued use of the existing A27 by traffic from Ford Road. This would result in two road corridors within the SDNP where currently there is only one thus spreading the associated negative effects on tranquillity over a wider area.

##### Route Option 5a

- 6.39. Similar to option 3 - There is potential for a minor improvement in tranquillity to be experienced east of the proposed junction at Yapton Lane, although this would be countered by the continued use of the road by traffic from Ford Road. However, this would be likely to be countered by the continued use of the existing A27 by traffic from Ford Road. This would result in two road corridors within the SDNP where currently there is only one thus spreading the associated negative effects on tranquillity over a wider area.
- 6.40. There would be significant negative impacts on tranquillity within the SDNP and its setting along the 5A route option alignment which would be experienced by users of the PROW network journeying to and from the SDNP. There would be significant negative impacts on tranquillity within the floodplain in the setting of the SDNP due to visible and audible movement of traffic across the still, quiet and essentially medieval landscape of the river valley in the setting of the SDNP. This would affect receptors both within and in the setting of the SDNP.

#### **7. Potential effects on the Public Rights of Way (PRoW) network and connectivity to the SDNP(Appendix 4i &4ii)**

- 7.1. The indicative NMU proposals provided for both Option 1 and Option 5A show an intent create a shared segregated pedestrian and cycle route alongside the improved A27 carriageway, for the length of the each of the improvement options. Whilst these intentions are commendable, they favour an east-west NMU movement. Greater consideration of NMU movement in a north-south direction of travel, enhancing connectivity to and within the SDNP would be beneficial.
- 7.2. The **Option 1** proposals indicate that, for the most part, the existing PRoW network, and connectivity to the SDNP would in essence remain unchanged. However, the road

improvement scheme could offer opportunities to strengthen the relationship between the PRow on either side of the A27 (and in doing so enhancing connections into the SDNP). Those opportunities appear to have been wholly missed by the design proposals to date.

- 7.3. **Option 5A** proposes a new stretch of bridleway, to be formed alongside the shared cycle and pedestrian lane, westwards of No. 57a Chichester Road (i.e. where the existing A27 becomes a dual carriageway, west of Arundel). This would improve connectivity of routes available of horse users through the SDNP, via the existing bridleway 386 allowing their movement from Slindon (and further west), through Rewell Woods, and onwards (via the local road, on the alignment of the existing A27) into Arundel, where horseriders could then return to Slindon via bridleway 415 (through the Waterwoods). Whilst the intended bridleway link would be beneficial, the broader NMU indicative proposals of Option 5A seem to facilitate east-west NMU movement, and frustrate some existing connections by closing some, requiring PRow users to use an underpass, or bridges, and elsewhere necessitating lengthy PRow diversions.
- 7.4. Both of the road improvement options appear to have given some consideration to east-west NMU movement, but have to some extent eroded, and by no means enhanced NMU movement (and connections to the SDNP) in a north-south direction of travel. Both of the road improvement options could harness more opportunities to reverse the existing severance of the landscape. This would further the objective of promoting understanding and enjoyment of the special qualities of the SDNP.
- 7.5. Furthermore, the indicative NMU proposals provided to-date are not reflected in the technical highway design drawings, and as-such there is no certainty that the intent is achievable without causing additional (and un-assessed) landscape and visual harm.
- 7.6. Indicative NMU proposals associated with the **Option 3** road improvement scheme have not been provided, although it is considered likely that they would follow the same principles as indicated in relation to the Option 5A road improvement scheme. These suggest that a shared cycle and pedestrian lane would be created along the route of the existing A27 (alongside a local road (i.e. a downgrading of the existing A27), stretching from Crossbush (in the East) to the driveway leading to Havenwood Park caravan site, where the proposed-route would tie-in to the existing A27. The indicative proposals also show a new bridleway to be formed alongside the shared cycle and pedestrian lane, westwards of No. 57a Chichester Road (i.e. where the existing A27 becomes a dual carriageway, west of Arundel). The indicative NMU proposals drawing also shows that the shared cycleway, pedestrian land and bridleway would connect to Bridleway 386 (on the northern side of the adjacent road (existing A27)). Connections to the south are thought to be unlikely in relation to the Option 3 road improvements, given the close proximity of the proposed carriageway.
- 7.7. The new stretch of bridleway, connected to the existing bridleway 386 would represent an improvement to the connectivity of routes available of horse users, allowing their movement from Slindon (and further west), through Rewell Woods, and onwards (via the local road, on the alignment of the existing A27) into Arundel, where horseriders could then return to Slindon via bridleway 415 (through the Waterwoods).
- 7.8. Whilst the intended bridleway link would be beneficial, the broader NMU indicative proposals seem to facilitate east-west NMU movement, but fail to address (and by no means enhance) NMU movement in a north-south direction of travel (and connections to the SDNP).
- 7.9. Headlines from Biodiversity (full report in **Appendix 5**)

#### Headlines from Biodiversity

- 7.10. The SDNPA Landscape and Biodiversity Lead (water) commissioned a data search from the Sussex Biological Records Centre and carried out an ecological desk-based assessment for the proposed routes.

- 7.11. Proposals from Highways England for a bypass and highway improvements around Arundel are currently at the pre-consultation stage. A range of options have been presented that include on line improvements and various options for new routes. Due to the range of potential options a search area 2km either side of the current route has been undertaken. All routes would be likely to have a significant negative impact on biodiversity: protected sites, semi-natural habitat extent, quality and connectivity, and populations of native species.
- 7.12. The proposals likely to have the least adverse ecological impact are the online routes, though potential significant negative impacts remain.

#### Designated sites: National

- 7.13. There are two Sites of Special Scientific interest within the search area. Arundel Park is within 1km of most of the route options, whilst Fairmile Bottom is 2km away. Arundel Park is designated for areas of woodland, chalk grassland, wetland and a rich invertebrate fauna. Fairmile Bottom is an area of species rich lowland chalk grassland with rare and unusual plant species. It is considered that none of the highway routing options will result in the loss or removal of any part of the nationally designated sites.

#### Designated sites: Local

- 7.14. Six locally-designated nature conservation sites are situated within the 2km radius. Three of these, Binsted wood LWS, Rewell wood LWS and Arun Valley LWS are directly in line with many of the routes. The first two sites are ancient woodlands with a rich and diverse flora and fauna. The third site is a complex of wetlands. There is a clear risk of direct impacts and habitat loss to Local Wildlife Sites (LWS) as a consequence of all of the proposals.

#### Protected Species

- 7.15. A significant number of protected and notable species records occur within the 2KM search area. These include 13 species of bats, hazel dormouse, great crested newt, water vole, stag beetle and reptiles. In addition there are many protected birds and over 130 species listed under section 41 of the NERC act. It is recommended that future ecological appraisal work should include detailed assessment of impacts on all protected species, supported where required by an appropriate level of survey.
- 7.16. Badger records are confidential and are not included in the report, however the large areas of woodland and parkland make it likely that there will be a large population of badgers in the area. A full badger survey will need to be carried out in advance of any works.
- 7.17. There is a concern that the routes will sever extensive areas of habitat reducing connectivity and feeding corridors for species such as bats and dormice. Thirteen species of bats have been recorded with feeding and maternity roosts in the local area and so it is likely that bats are commuting between woodlands and maternity roosts in buildings in Arundel and the surrounding villages.
- 7.18. These impacts will need to be fully assessed based on robust baseline information and field surveys; if this is not available for the initial route selection however, a precautionary approach to potential impacts is recommended which should first seek to avoid ecological impacts.

#### Priority habitats

- 7.19. All routes may impact on known areas of priority habitats. The largest areas are deciduous woodland, wood pasture and parkland, hedgerows and floodplain grazing marsh. There are also several chalk streams crossed by the proposed routes. Much of the woodland is designated as ancient woodland and there are a large number of veteran trees in the area.

#### Invasive non-native species

- 7.20. The highway route options pass through areas where a number of non-native and invasive species have been recorded. In the majority, these relate to plant species and garden escapees, but include 17 species listed on Schedule 9 of the Wildlife and Countryside Act in

England and Wales (including plants which are an offence to plant or otherwise cause to grow in the wild and plants that are illegal to sell) such as Japanese Knotweed.

- 7.21. Controlling the spread of these species is important but, especially in the case of Schedule 9 plants, construction projects can contribute to the spread of invasive species. The exact location of invasive species will need to be targeted for managed removal prior to any clearance or construction work. Based on the evidence reviewed to date there is considered to be **high potential** for non-native and invasive species to be present on all route options.

#### Ecological Enhancement

- 7.22. Natural Environment and Rural Communities Act 2006 encourages the incorporation of ecological enhancements into proposals. It is recommended that initial ecological surveys and reporting seek opportunities to contribute to biodiversity enhancement of adjacent habitats and contribute to existing initiatives.

#### Habitat connectivity and opportunity mapping.

- 7.23. The SDNPA have utilised the habitat connectivity and opportunity mapping tool to understand the connectivity and opportunities in the study area.
- 7.24. Mapping of Habitat connectivity illustrates a high level of connectivity of current habitats in two areas. The Arun valley has high connectivity of wetland habitats including floodplain grazing marsh, reed beds and semi improved grasslands. These areas will be fragmented by any of the off line improvements. At the western part of the scheme there is high connectivity of woodland habitats, these would be fragmented especially by option 3.
- 7.25. In terms of habitat potential there is good potential to extend the areas of woodland in the western part of the scheme but most of the potential for other habitats is north of the study area.
- 7.26. The habitat connectivity and opportunity areas have been mapped for relevant habitats in the study area and these maps are included in **Appendix 5**.
- 7.27. This work is in the early stages and further scenario testing will be undertaken prior to the SDNPA formal response is submitted.

#### Ancient woodland

- 7.28. All route options would result in the loss of Ancient Woodland which is contrary to National Planning Policy. The amounts are as follows:
- Option 1 would result in the loss of 5.5ha of Ancient woodland
  - Option 3 would result in the loss of approximately 24Ha of Ancient woodland,
  - Option 5a would result in the loss of 6 ha of Ancient woodland

All figures are according to information available at this stage. The following text is taken from the National Planning Guidance notes<sup>5</sup> for guidance on Ancient Woodland and is included for information;

- 7.29. Trees and woodland classed as ‘ancient’ or ‘veteran’ are irreplaceable. Ancient woodland takes hundreds of years to establish and is considered important for its wildlife, soils, recreation, cultural value, history and contribution to landscapes.
- 7.30. ‘Ancient woodland’ is any wooded area that has been wooded continuously since at least 1600 AD. It includes:
- ‘ancient semi-natural woodland’ mainly made up of trees and shrubs native to the site, usually arising from natural regeneration

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<sup>5</sup> <https://www.gov.uk/guidance/ancient-woodland-and-veteran-trees-protection-surveys-licences>

- ‘plantations on ancient woodland sites’ areas of ancient woodland where the former native tree cover has been felled and replaced by planted trees, usually of species not native to the site
- 7.31. Ancient semi-natural woodland and plantations on ancient woodland sites have equal protection under the National Planning Policy Framework.
  - 7.32. ‘Wooded continuously’ doesn’t mean there has been a continuous tree cover across the entirety of the whole site. Open space, both temporary and permanent, is an important component of woodlands.
  - 7.33. Ancient wood pastures and historic parkland can be a distinct form of ancient woodland. Many have not been included on the Ancient Woodland Inventory because their low tree density meant that they didn’t register as woodland on historical maps. Where ancient wood pastures are identified they should receive the same consideration as other forms of ancient woodland.
  - 7.34. If the planning authority decides to grant planning permission in line with the National Planning Policy Framework, it should seek appropriate mitigation or compensation from the developer. As ancient woodland and veteran trees are irreplaceable, discussions on compensation should not form part of the assessment of the merits of the development proposal.
  - 7.35. The planning authority should use planning conditions or obligations to secure these mitigation or compensation measures and subsequent ecological monitoring.
  - 7.36. The Authority strongly opposes the loss and or deterioration of Ancient Woodland within the SDNP on the basis of it being an irreplaceable habitat for which there is no mitigation.
  - 7.37. Members will recall discussions regarding the requirement from Natural England for compensatory plantings of woodland where ancient woodland is to be lost. This process is based on the premise that mitigation is not possible as the habitat is irreplaceable. Compensation plantings are proposed by Natural England. For example for HS2 phase I where 30ha of ancient Woodland would be lost over the 190mile length between Birmingham and London, Natural England have proposed a 30:1 compensatory ratio of new plantings along its length (although this ratio is under discussion with DfT and HS2). Using this ratio for the Arundel scheme options gives the following compensatory planting requirements;
    - 7.37.1. Option 1 5.5ha Ancient woodland lost = 165ha compensatory woodland planting
    - 7.37.2. Option 3 24ha Ancient woodland lost = 720ha compensatory woodland planting
    - 7.37.3. Option 5a – 6 ha of Ancient woodland lost = 180ha compensatory woodland planting
  - 7.38. The landscape of the SDNP surrounding Arundel is heavily wooded already and the feasibility of planting large areas of woodland to achieve such a scale of compensation woodland planting in this area is not clear. The length of the Arundel bypass route options are not comparable with HS2 phase I, and the parameters for compensatory plantings in terms of the area of search would be decided on a case by case basis by Natural England.
- 8. Headlines from Archaeology/Cultural Heritage (Full report at Appendix 6)**
- 8.1. The South Downs National Park Authority (SDNPA) commissioned Hampshire Services to carry out a Desk-Based Assessment (DBA) of cultural heritage issues relating to two proposed route options (the Red Route (1) and the Pink Route (3)) of the A27 trunk road located to the south of Arundel, West Sussex. The assessment has concluded that:
  - 8.2. “The construction of the Pink Route would have a direct impact upon the SDNP in the areas of Tortington Common, Pinewoods and Paine’s Wood, while the Red Route would impact upon the SDNP in the area of former park land to the west of Park Farm. The assessment

has concluded that the proposed development is likely to have a major and extensive impact upon any undesignated archaeology located along both the Pink and Red Routes.”

- 8.3. Both Arundel routes cross a part of West Sussex that is known to have been occupied from the Lower Palaeolithic through to the present day and has the potential to contain as yet unrecorded archaeological features and/or deposits associated with known internationally important Palaeolithic activity recorded at Boxgrove quarry c. 7km to the west of the scheme. There is also potential for early prehistoric material to exist within the alluvial deposits that cover the floodplain of the River Arun that would be impacted by the construction of the Pink Route. Areas of Iron Age field systems and settlement have been recorded at the western end of the scheme. Roman activity of similar intensity follows on from this period with traces recorded at both ends of the scheme. The Pink Route crosses the line of a recently discovered Roman road that leads from Chichester in the west towards Brighton in the east. Evidence for a possible high status Roman building has also been recorded close to the Pink Route at Tortington Priory. Fragments of both the medieval and post-medieval landscape in the form of some surviving field boundaries are also crossed by both routes
- 8.4. The study of available aerial photographs along the route also established the presence of as yet undated linear features immediately to north west of Tortington Priory, as well as illustrating the previously identified later prehistoric enclosure to the east of Park Farm.
- 8.5. The potential impacts upon the settings of the SDNP, other Scheduled Monuments, Listed Buildings and Conservation Areas will require more detailed investigation, leading to mitigation measures.
- 8.6. A programme of archaeological fieldwork consisting of field walking, geophysical survey, geo-archaeological trial pitting and trial trench evaluation should be carried out to fully assess the potential of as yet unrecorded archaeology along the Pink and Red Routes as well as the site north of Worthing This programme should then be followed by an assessment statement that should set out the terms of further investigation and excavation, leading to the academic publication and public dissemination of all results. Any archaeological work carried out within the SDNP should include public engagement as part of any mitigation strategy with any archives deposited in a publically accessible archive.

## **9. Heritage Visual Impact Assessment**

- 9.1. The SDNPA has undertaken a heritage visual impact assessment of Arundel castle using the Zone of Theoretical visibility plot from the castle in the SDNPA Viewshed Analysis (2015) as a baseline from which to establish the extent of the setting of the castle. The report is included in **Appendix 10**.

## **10. Ecosystem Services (including Water) (Appendix 7)**

### Outputs from the EcoServ GIS Tool

- 10.1. The tool makes use of a Base map to generate its outputs. This base map overlays a wide range of environmental datasets, including soils, geology, wildlife and habitat data. From this the tool produces output maps that consider a range of Ecosystem Service functions.
- 10.2. In terms of the A27 route option, EcoServ maps have been produced for the following services. These were considered the most relevant in terms of the location and the options being presented.

### Air Purification

- 10.3. Plants and trees are central to the cycle oxygen and carbon dioxide in the atmosphere, they have an important role to play in regulating levels of air pollution. Air purification occurs where habitats help to intercept and absorb airborne pollutants produced from road traffic.

### Water Purification

- 10.4. Areas where vegetation provides benefits in terms of water purification effects near streams and water courses.

### Noise regulation

10.5. Areas where habitats provide benefits in terms of absorbing noise pollution.

### Pollination

- 10.6. The effective pollination of crops by Bees and other pollinators is vital to the life cycle of many plants. We rely on this 'natural service' for growing food crops as well as other plants and wildflowers. This highlights the ability of areas to support wild pollinators and deliver pollination services.
- 10.7. Other map outputs were also considered for the following Ecosystem Services;
- Accessible Nature
  - Green Travel
- 10.8. It was considered that they did not add value over and above the other assessments within this report - such as impacts on access and recreation opportunities.
- 10.9. It should be noted that many areas have potential to offer multiple benefits in terms of Ecosystem Services. This is certainly the case in terms of woodland and other semi-natural habitat types. In the interests of clarity, we have considered them individually in this case. There may be sites or features affected by the proposals that deliver a number of additional Ecosystem Services that provide public benefit or value.
- 10.10. In terms of other important cultural services that derive from our interaction with the natural environment, such as tranquillity, cultural heritage and recreational values, these are picked up in other assessments that support our submission.
- 10.11. For each service four output maps or 'scenarios' have been produced that show:
- **Ecosystem service capacity:** The performance and capability of the natural environment to produce Ecosystem derived goods and services.
  - **Service demand areas:** Areas where there is societal demand (need) for a service and/or the need for ecological regulation
  - **Service delivery or benefitting areas:** Where capacity and demand coincide, this represents 'benefiting areas' or areas where it may be necessary to protect or enhance a specific Ecosystem Service.
  - **Management areas:** Highlights areas where there are gaps in provision occur, and where opportunities may exist to improve ecosystem service function.
- 10.12. In terms of the potential impacts of the route proposals on the study area in terms of Ecosystem service function, based on our initial analysis we make the following comments

### Air Purification

- 10.13. As with all major road schemes the impact on local air quality is an issue. Trees and woodlands play a principal role in regulating air quality by helping to intercept and absorb airborne pollutants produced by traffic. This is certainly the case for the large blocks of woodland in Tortington Common and Binstead Wood. The current road alignment is reliant on them to regulate airborne pollutants from existing traffic. In terms of their capacity to provide air purification and improve local air quality they score very highly (within the upper 80-100 quartile). This makes them an extremely valuable resource in terms of the wider benefits they provide for local residents.
- 10.14. There is also a clear correlation with very prominent 'demand' areas for this service within Arundel itself, and the area of the Caravan Park adjoining Winchers Wood and Paine's Copse. This represents a combination of factors including a higher population as well as existing air pollution levels.
- 10.15. Option I would have the least impact upon the existing capacity of the woodland to provide this service. In the case of both of these it highlights areas to the East and North of Arundel



as areas where it would be necessary to target improvements. This is based upon the current road infrastructure and alignment, and does not currently account for the impact of increased road traffic along a more 'on-line' option.

- 10.16. Option 3 would represent a very poor choice. It is routed directly through Tortington Common and the areas of woodland to the South of the A27's current alignment. This option would have a major and very adverse impact upon the capacity of the landscape to provide this function. The woodlands are the very feature that are helping to regulate and absorb airborne pollutants. Their loss would increase the radius and distance of airborne particles and most likely increase pollution levels in proximity to the demand areas that sit close to the new routes. The preferred option should be one that does not directly impact upon the capacity of the landscape to provide this function. The aim should be to enhance this capacity as far as is possible.

#### Water Purification

- 10.17. There are a number of areas close to or adjoining the proposed route options that have a high capacity in terms of supporting the purification of water. These represent areas of habitat and vegetation that have the ability to reduce the impacts of pollutants before they reach watercourses. There are also a number of prominent watercourses in that location that rely on this service. Once again it is the areas of woodland that are providing this capacity, and the scores are very high (in the upper 80-100 quartile).
- 10.18. Most prominent areas are Tortington and the area to the South of Priory Farm. This is the point where route Option 3 and 5A diverge. This appears to be a significant watershed and both Option 3 and Option 5A would impact upon it. There are further important areas of demand further West at Meadow Lodge and Warburton Farm. In terms of the proposed road alignments it is Option 5A that is likely to have the most direct impact on these.

#### Noise regulation

- 10.19. There is a strong correlation between the outputs from the air purification modelling and these results for noise regulation. This is because it is the woodland areas, along with the existing topography, that underpins this service. Again the areas of woodland on Tortington Common score very highly (In the upper 80-100 quartile). The areas of woodland in Binstead wood also score high, though they are more distant from the areas of significant demand along the Western edge of Arundel.
- 10.20. The demand for this service focusses on the settlement of Arundel and the Caravan Park. There are also prominent hotspots around Walberton and Slindon. The modelling highlights the need to 'protect and maintain' the areas that provide this service. Specifically Stewards Copse and Tortington Common to the West of Arundel.
- 10.21. Option 3 would represent a very poor choice in this instance as it directly impacts upon the resource providing this service. By losing woodland at the scale demanded by the scheme it greatly reduces the capacity of the landscape to absorb and reduce noise pollution. The settlements affected by the road proposals require that these services are maintained and enhanced, not reduced.
- 10.22. Option 5A runs to the South of the park and does not directly impact upon Tortington Common. It does however impact upon Binstead Park, though retains much of the woodland block of Binstead wood. This would in part protect the ability of the woodland habitat to absorb noise pollution. As this route is further South than the current alignment, it would certainly have a more direct impact on Walberton.
- 10.23. It should be noted that this considers the impacts of the scheme proposals on noise regulation only. There are wider considerations of the impact of proposals on the existing Tranquillity of the area as well. Tranquillity is an experiential quality of the landscape and includes a wider range of factors, both visual and audible.

## Carbon Storage

- 10.24. Woodland is an important habitat in terms of its capacity to store Carbon per unit area. Carbon storage occurs in both the woodland itself, and the underlying soils. The need for Carbon Storage is high, particularly within the National Park and for the settlements within and around it. The areas that score highest in terms of existing capacity (within the upper 80-100 quartile) are the areas of woodland within Tortington Common.
- 10.25. In terms of demand, there is a universal need to improve the capacity for Carbon storage. The areas of highest demand are to the North and East of the settlement of Arundel. This is based on the current road alignment and the existing capacity within the landscape. In this case Option 1 would need to look for opportunities to improve and enhance the capacity to store Carbon to ensure these needs are properly met.
- 10.26. In the case of Option 3 the road scheme would directly impact upon the woodland areas and soils that are providing the carbon storage capacity. These areas are highlighted as management zones that need to be protected and maintained.
- 10.27. With Option 5A the route passes through Binstead Park and the farm land within the setting of the National Park. These areas generally score lower (within the low 1-20 quartile) in terms of their capacity to store carbon. However there are existing strips of woodland within this landscape that score slightly higher. As these score quite low they represent areas where there is a need to improve and enhance the capacity for Carbon Storage. Though the impact in terms of existing Carbon storage is likely to be lower with this Option, it is still an important factor for consideration.

## Pollination

- 10.28. The modelling highlights the relative ability of different habitats types, including woodland and grassland, to provide this service. For route Option 3, there are a number of significant high scoring (upper 80-100 quartile) areas surrounding the proposed routes. These areas are important for their capacity to support wild pollinators. These areas include the entirety of Tortington Common, Binstead Wood and Binstead Park. From this perspective this is the poorest option.
- 10.29. For the areas further south, within the setting of the National Park, that are relevant to route Option 5B. The grassland and linear features still score highly (upper 80-100 quartile). However, these are more interspersed with areas of lower capacity scores (mid 40-60 quartile). The impacts of this route option are marginally less pronounced.
- 10.30. In terms of the demand for pollination services from crops and arable land near to and adjoining the proposed routes. There are core areas around Tortington and Priory Farm, Walberton Farm and land around Park Farm to the North of the existing road alignment. These also score very highly (in the upper 80-100 quartile) and have large buffer areas that extend into Binstead Park, Binstead Wood and Tortington Common. Both Option 3 and 5B cut through two of these core areas. Option 1 cuts through the edge of one along with its buffer close to Scotland Barn and Paine's Wood. In this respect it is the least harmful option.
- 10.31. These high scoring areas should be 'protected and maintained'. All three scheme options will have a harmful impact on pollination services. Option 3 and 5B being the most significant, Option 1 being the least

## **11. Drainage & Water**

- 11.1. HE have highlighted the potential impact on the flood plain and increased flood risk this could lead to additional bunding/ embankments and the related landscape impact.
- 11.2. Whilst the SDNPA would strongly advocate SUDs and other natural drainage interventions these need to be sensitively designed in the landscape in order to enhance local character.
- 11.3. There will be water quality and biodiversity concerns with all water course crossed by the scheme, especially during construction but additionally during operation if appropriate pollution interventions are not in place.

- 11.4. HE have recognised main river (EA adopted) water courses in terms of impacts on water quality and flood risk but have little detail on other water courses, these include one chalk stream (a priority habitat)
- 11.5. Likely Impacts on Ramsar site within the SDNP (Amberley Brooks), suggest that HRA is needed to assess impacts on the water environment and flight paths for migrating birds,

## **12. Summary of Economic impacts**

### Specific Findings - Arundel

- 12.1. The planning process for Arundel is in considering options between now and Summer 2017. No definitive option can be considered, and therefore consideration is given here to a generic off-line bypass option with a junction at Ford Road.
- 12.2. It should be noted that there will be network impacts between options at Worthing and Arundel, and this has been recognised by HE, with modelling work taking this into account. The BCR presented is 1.7:1, which represents medium value for money as an initial assessment. It is unclear what this includes, but reliability and induced traffic impacts, together with accident and environmental effects may make a significant difference to this initial finding.
- 12.3. Local economic impacts will depend in part on whether a junction is provided with Ford Road, due south. This would help to open up development opportunities at Ford Airfield with at least 1,500 houses<sup>[1]</sup>, but has not (yet) been identified as 'dependent development' for the Arundel scheme. It would represent an economic benefit in its own right, although by definition it would load additional traffic on to the Strategic Road Network and therefore exacerbate congestion compared with a 'no development' scenario.
- 12.4. Whilst the town of Arundel itself would be expected to benefit from congestion relief, and therefore improve its appeal as a tourism destination, any bypass scheme will inevitably have an adverse impact on the wider surroundings of the park. The extent of this will be dependent on the scheme alignment chosen, and the degree of environmental mitigation proposed.

## **13. Design**

- 13.1. The design of the river valley crossing and the river bridge has been identified in early discussions with members as a key issue which will affect the likely impacts on the SDNP and its setting. All 3 of the route options will require an elevated valley crossing both to clear the flood plain, but also to bridge over the railway and to meet the Crossbush junction on the eastern valley side.
- 13.2. The SDNPA Design Review Panel and the SDNPA Design Officer have prepared joint comments following an informal session of the panel on 18<sup>th</sup> September – comments to be added

## **14. Summary of Impacts on Special Qualities – Arundel**

- 14.1. Please refer to the tables in **Appendix 12**

## **15. Maps of Schemes**

- 15.1. Complete sets of the maps will be available for the pre NPA presentations by HE during their 10 week consultation period
- 15.2. A working draft route maps for the scheme is attached at **Appendix 2**

## **16. P&P Committee NPA Considerations**

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<sup>[1]</sup> <http://ford.arun.gov.uk/main.cfm?type=EVIDENCEBASE>

- 16.1. Members will recall the background and discussions which led to the adoption of the SDNPA 'Position Statement' as the basis for responding to proposed road schemes for the A27 (Arundel, Chichester, Worthing & Lancing, East of Lewes) at the 23 September 2014 SDNPA meeting
- 16.2. Subsequently the A27 has been the subject of workshops and further discussions at the Member workshop on 1 December 2015, which took the decision to gather economic evidence for the impacts on the SDNP. There was also a pre P&P tour and presentation by HE and Mott MacDonald, and the Goodwood Estate at Goodwood, on 26 January 2016
- 16.3. This was followed by a pre P&P workshop March 2016 discussing the evidence on the impacts on the Special Qualities, and the P&P meeting where the decision 'to recommend to HE that taking either northern route option forward would lead to unacceptable and irreversible damage to the SDNP' was adopted
- 16.4. Finally, at the NPA meeting on 24 March 2016 it was decided that, following the last minute dropping of the northern route options, the Chair would write to HE expressing the view that HE had made the right decision in dropping the routes, and that the SDNPA would have vigorously defended the SDNP should either have come forward. It is clear that the successful outcome of this process in defending the National Park from a sudden, unexpected and serious threat was based upon detailed evidence of the impacts produced from across SDNPA, early Member level discussion, a clear strategic assessment, good officer relations with HE and strong partnership working across the National Park. The SDNPA will take the same approach for each new HE consultation but it is worth noting that this process is costly, taking up a large amount of officer time across the organisation which will have knock on effects in other areas

## 17. Other Implications

Implication	Yes*/No
Will further decisions be required by another committee/full authority?	Yes – NPA October 17
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
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?	There are no implications arising
Are there any Human Rights implications arising from the proposal?	No
Are there any Crime & Disorder implications arising from the proposal?	Yes – considerable public action against option 3 putting a bypass through ancient woodland at Arundel is anticipated from Sussex Police. Informal estimates are in the low £10's of millions.

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: 1. Living within environmental limits 2. Ensuring a strong healthy and just society 3. Achieving a sustainable economy 4. Promoting good governance 5. Using sound science responsibly	Improving journey time reliability may - encourage people to live further from their work - to use their vehicle more often - become more dependent on their vehicle, and the technology that drives it

### 18. 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
Putting wildlife, landscape ahead of people	Likely	Possibly significant	Purposes of the SDNPA, Evidence gathered, NPPF,

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Appendices

(hard copies of linked appendices are available upon request)

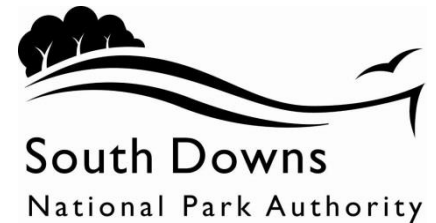
1. NPA Position Statement (attached)
2. Location plan of Arundel Scheme (attached)
3. [Excerpts from the PSDNP Inspectors Report for Arundel and Binsted](#)
4. i. [Landscape and Visual Assessment and Impacts on access of Arundel route Option 3](#)  
ii. [Landscape and Visual Assessment and Impacts on access of Arundel route Option 1 & 5A](#)
5. [Biodiversity Report](#)
6. [Cultural Heritage Report](#)
7. [EcoServe Maps](#)
8. [Impacts of the A27 Schemes on the SDNP Economy](#)
9. Scheme maps (to follow)

	<p>10. <a href="#">Arundel Castle Heritage Setting Assessment</a></p> <p>11. Table of impacts on the SDNP Special qualities (attached)</p> <p>12. <a href="#">Map of crossing points for access across A27</a></p>
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 Strategy Lead (Chalk), Landscape Officer, Access and Recreation Strategy Lead, Planning Policy Manager, Sustainable Economy Strategy Lead
External Consultees	None
Background Documents	<p><a href="#">NPA Dec 14</a></p> <p><a href="#">NPA Dec 15</a></p> <p><a href="#">P&amp;P Committee Mar 16</a></p> <p><a href="#">NPA Mar 16</a></p>

A27 Position Statement

**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.



Location plan of alternative route options at Arundel



