

## **Appendix C: Detailed Comments on the Preliminary Environmental Information Report**

This document provides comments from West Sussex County Council (hereafter referred to as 'WSCC') on the A27 Arundel Bypass Preliminary Environmental Information Report (PEIR), published by National Highways on 11 January 2022.

The following table provides comment for each PEIR chapter relevant to WSCC, with specific paragraph/table/figure references where applicable.

**NB:** It does not include comments on behalf of the District or Borough Councils in West Sussex.

Reference	WSCC Comment
<b>Non-Technical Summary</b>	
General	WSCC welcomes the use of simple language and clear layout to help a non-technical reader of this document. This document could have been supplemented with more photographs/visualisations and diagrams to help the reader with understanding aspects such as construction principles.
2.1.4	Please replace ' <i>heritage value</i> ' with ' <i>significance</i> ' or ' <i>interest</i> '. WSCC is unclear what ' <i>wider influence of their setting</i> ' means; please consider re-wording for the Environmental Statement (ES).
4.1.3 and 4.1.5	The Development Consent Order (DCO) application will also include a draft of the Environmental Management Plan (EMP). Although draft, it is advised that this document will need to be very detailed to provide confidence that adverse impacts will be avoided or minimised to an acceptable level. It is unclear whether the EMP covers just the construction phase or both the construction and operational phases. WSCC expects this to be outlined within the ES.
5.2.4	WSCC would have liked to have seen the detail with regards construction haul routes shown within the documentation to allow stakeholders to have an understanding at this stage of likely construction impacts.
6.2.1	Reference should be made to the fact that the significance of any previously unknown archaeological heritage assets within the route corridor is currently unknown but could potentially be high. There currently exists the potential for significant adverse effects upon significant heritage assets.
6.2.4.	Operational effects on setting; this should be included under Section 6.3.
6.3.2	The operation of the scheme will result in some adverse effects on prominent heritage assets within Arundel, specifically Arundel Castle and the Arundel Conservation Area. The significance of these heritage assets is high and the effects may be significant.
7.2.5	Route alignment and engineering design options should be fully explored and only as a last resort should removal of veteran and ancient trees be considered. WSCC expects detailed assessment of options to cover justification for the removal of these trees.
7.2.8	WSCC should be included as a key stakeholder for consultation on woodland/tree loss and potential mitigation and it expects to be consulted on these matters as part of the ongoing consultation.
8.3.1	Lighting is only being incorporated into the scheme design where it is essential for safety reasons to reduce light spill onto bat habitat. This is critically important. Thus, for ecological reasons, it will not be acceptable to light the green bridges or underpasses (including Binsted Rife underbridge) despite their proposed multi-functional use as rights of way, bridleways and/or for vehicular traffic.
17	Where reference is made to the design of any golf course mitigation, it should also be stated that a baseline settings assessment will be needed to assess the contribution made by setting (as existing) to the

	heritage asset's significance; only then can the impacts of proposed changes be understood and assessed.
<b>Chapter 1 - Introduction</b>	
1.3.9, 1.3.10 and Appendix 1-C	WSCC welcomes the inclusion of National Highways responses to comments made by stakeholders at the Scoping Stage. However, not all comments raised by WSCC have been included. WSCC expects National Highways to include all comments in the Consultation Report for DCO submission, to ensure all comments to date have been responded to.
1.4.1	WSCC is pleased that effective stakeholder engagement has been noted as a key driver for the design evolution process. To date, it has been noted that meetings held could have provided a more meaningful platform for stakeholders to share vital local knowledge and technical input. WSCC welcomes the updating of the Terms of Reference and look forward to more opportunities to provide input into the design and development of the EIA going forward.
1.6.9	Local concerns raised to WSCC during the consultation period about the methods of engagement (as documented in the published SoCC) will be considered as evidence for inclusion in the acceptance phase Adequacy of Consultation response.
<b>Chapter 2 -The Scheme</b>	
Traffic and Transport	<p>There is insufficient information about the impacts of the scheme on the transport network. As the assessment of some environmental impacts (e.g., air quality, noise and carbon) are dependent on information from the traffic model, it is not possible to draw any firm conclusions based on the assessment of these impacts at this stage. As a minimum, the following should be provided:</p> <ul style="list-style-type: none"> <li>• Transport assessment (the scope of which should be agreed with WSCC);</li> <li>• Design audit identifying any departures from standards;</li> <li>• Local model validation report;</li> <li>• Traffic forecasting report;</li> <li>• Road safety audit;</li> <li>• Construction traffic management plan; and</li> <li>• Walking Cycling Horse Riding Assessment Report (WCHAR).</li> </ul>
Traffic and Transport	<p>It is unclear how the scheme will perform as part of the wider highway network which is already congested in places. The scheme has the potential to exacerbate existing issues and create new ones, either in isolation or in combination with other planned network changes and planned development. The apparent rat run on The Street in Walberton requires further investigation to understand the causes and potential solutions which should be included in the proposed scheme. In order to understand the issues and the extent to which they can be mitigated, the information requested should include diagrams detailing link flow changes and models (or other suitable technical information) showing performance of the following junctions in each assessment year:</p> <ul style="list-style-type: none"> <li>• A27/A284 'Crossbush' junction (including any assumptions about interactions with the Crossbush service station);</li> <li>• A27/A29 'Fontwell' junctions (east and west);</li> </ul>

	<ul style="list-style-type: none"> <li>• A284/A259 'Lyminster Bypass/Fitzalan Rd' junction;</li> <li>• A27/B2233 'Crockerhill' junction;</li> <li>• A29/A259 junctions;</li> <li>• A27/A280 'Patching' junction;</li> <li>• A24/A280 'Findon' junction; and</li> <li>• A259/A2032 'Goring Crossways' junction.</li> </ul>
General Arrangement (sheet 1 of 9)	The proposed Tye Lane junction with existing A27 and Mill Lane involves an acute turn for westbound traffic at the end of a long straight where presumably national speed limit will apply. There is potential for road safety issues. WSCC expects a road safety audit and details of how the recommendations are addressed within the design to be produced.
General Arrangement (sheet 1 of 9)	Latest cycle design guidance (LTN 1/20) recognises the need for segregation between different users and generally seeks to move away from shared use facilities such as the proposed footway/cycleway alongside the detrunked A27. WSCC expects evidence to justify the choice of design solution in this location as there appears to be plenty of space available.
General Arrangement (sheet 4 of 9)	The Tortington Lane overbridge has the potential to affect the deliverability of a junction with Ford Road, now or in the future. This should be taken into account in determining the dimensions of this structure which should not preclude the addition of a Ford Road junction designed to current standards.
General Arrangement (sheet 4 of 9)	It is unclear what design standards have been used to design the Tortington Lane overbridge which appears to include a steep gradient on the southern side of the A27. A design audit is expected, setting out what standards have been used and any departures from standards that will require WSCC approval.
General Arrangement (sheet 5 of 9)	The proposed Crossbush junction looks quite small. A junction model (or similar information) is expected to demonstrate that the scheme will operate to an acceptable level without significant queuing on the A284 and existing A27. It is not clear whether the proposed scheme includes enough queuing space for traffic to turn right into the service area without queuing back through the roundabout/slip road. Evidence is required that the queueing space is sufficient.
Table 2.1	The height of the viaduct has the potential to affect the deliverability of a junction with Ford Road, now or in the future. This should be taken into account in determining the clearance height and ensuring the viaduct height does not preclude the addition of a Ford Road junction designed to current standards.
2.3.5	WSCC expects detailed engagement on the de-trunking strategy going forward, including the potential to mitigate impacts elsewhere and the wide ranging opportunities this element of the scheme could bring to the local area. This sections also states ' <i>de-trunking of the existing A27 carriageway may involve some works within the National Park given that a large section of it is located within the designated area</i> '. WSCC suggests this is changed to 'will' as this is more accurate.
2.3.15	' <i>The PEI Report is based on the maximum area of land likely to be required for construction and operation of the Scheme</i> '. There needs to be a clearer understanding of construction working areas, haul routes, and clarity that enough land is available for mitigation and

	enhancement within the Draft Order Limits before certainty can be had on the above statement.
2.4.3	WSCC requests that a crossing schedule is produced for inclusion within the ES, to outline each type of crossing (e.g. watercourse, road, PRoW) and a brief description of the construction methodology to be used.
General	WSCC requests further consultation on surfacing along the entire route and the benefits of using a 'very low noise' surfacing for the entire length, rather than proposed for just the section adjacent to the Church of St Mary's Church.
2.4.11	WSCC welcomes the review by the Design Council and wants National Highways to acknowledge all comments made, rather than just that stated in this paragraph. The review was wide ranging and WSCC would request the design feedback given is taken on board, with clear narrative in the ES as to how they have been factored into the design.
General	WSCC welcomes reference to the ' <i>Road to Good Design</i> '. Importance must be placed on the criteria for good design within the National Networks NPS (NN NPS), where it states, ' <i>Applicants should include design as an integral consideration from the outset</i> ', and ' <i>Visual appearance should be a key factor in considering the design of new infrastructure, as well as functionality, fitness for purpose, sustainability and cost</i> '. WSCC wants to see how these criteria have been applied to the final design presented as part of the DCO application.
2.4.12	WSCC wants to see the overall footprint minimised as far as possible and, therefore, it would be useful if a table was given on the key features (engineering parameters) for stakeholders to understand both construction and operational land-take.
2.4.16 and 2.4.17	Understanding where required lighting, signage, speed cameras, location of vehicle restraint systems and emergency and maintenance access would be required, will be needed for a full and robust EIA to be undertaken. WSCC requests that this information is included as part of the EIA going forward. Consultation on a lighting strategy will be required with key stakeholders.
2.5.1.d	Sections and visualisations which show how the proposed green bridges will sit in the landscape and how their design has responded to landscape character will also be required.
2.6.2	Proposals that involve the extension or creation of new golf facilities will need to be factored into the LVIA too, including viewpoints and the ZTV. WSCC request that viewpoints and visualisations are included to show the likely impact of the golf course on visual and landscape receptors.
2.6.8	It is unclear what design standards have been used to design the option for an offline Yapton Lane overbridge. A design audit should be provided setting out what standards have been used and any departures from standards that will require WSCC approval.
2.7.1 and 2.7.2	The requirement for a concrete batching plant to enable construction of the scheme should be confirmed, along with its associated impacts presented within the ES.

2.7.4	Further details regarding the construction programme should have been provided, even in a preliminary sense to aid the assessment of impacts and required mitigation. This will be required within the ES.
2.7.8	The optioneering work to locate the chosen compound locations should have been discussed with stakeholders ahead of PEIR publication. What consideration for sensitive receptors has been undertaken? Confirmation on whether ZTVs for each compound have been undertaken is required. Further details on layouts, locations (along with any smaller compounds not included in the consultation material) should be consulted upon prior to ES stage assessment. Concerns are raised with the close proximity of some sensitive receptors to the locations outlined, including Yapton Lane compound, (residential properties along Yapton Lane and archaeological sensitivities) and Ford Road. Also of concern are potential effects to PRow and how these compounds will be accessed for 3-4 years from the local road network.
2.7.24	A clearer understanding of the work and associated impacts of the utility diversions is needed as part of the ES, including whether enough land with the Draft Order Limits been included to facilitate this if consultation with suppliers/owners/managers has not been undertaken in detail and solutions are not finalised. No detail on the potential effects of these diversions have been included in the PEIR.
2.7.28	Clarity is required on where properties would be demolished and the impact of this across all EIA topics needs addressing. No detail is given, although five properties along Binsted Lane are referred to in paragraph 12.6.2, and reference to Morley's Croft (Grade II listed building) in 6.8.5 where it states, ' <i>Should construction unavoidable require this building to be demolished, it is likely that its loss would be significant</i> '. WSCC is concerned this level of detail has not been confirmed in the PEIR.
General	Concern is raised about potential effects upon Arundel Fire Station and the impact to emergency response times. Further details, including Flood Risk Assessment (FRA), TA and the CTMP are required, and consultation with West Sussex Fire and Rescue during the next stages of the project.
<b>Chapter 3 - Assessment of Alternatives</b>	
3.4.4/3.4.5	The PEIR lacks sufficient detail about how environmental criteria have influenced the decision-making process, specifically with regard the development of the Grey Route. In 2019, WSCC raised concerns that the Grey Route (option 5BV1) did not offer the best balance between traffic, economic and social benefits and environmental impacts. Although the PEIR states that ' <i>Environmental effects have been considered during this appraisal process</i> ', a much clearer narrative is needed to explain how the environment has driven the design process. Constraints mapping and scoring criteria should be included within the ES chapter, to make the assessment much more transparent. How feedback from the community and stakeholders have influenced the design must be clearly demonstrated and the main reasons for the selection of the chosen option and the rejection of alternatives should be presented in accordance with the requirements of the EIA Regulations in the ES.
3.5.65	WSCC welcome the decision of a viaduct option for the River Arun crossing, over that of an embankment. However, there are still concerns about the design and placement of the structure and future

	work needs to involve specialist design input, as well as that of stakeholders, to ensure the viaduct is both sensitively designed and informed by the EIA. There must be the highest standard of design, which must incorporate a clear design narrative. The design must outline to stakeholders and the community how the assessment work undertaken will mitigate adverse impacts and communicate benefits through wide-ranging enhancement measures that go above and beyond those required to mitigate the scheme. WSCC had expected the flexibility in design height indicated within the PEIR to be further assessed to allow the EIA to inform this design element.
<b>Chapter 4 - Environmental Assessment Methodology</b>	
General	WSCC welcomes, pursuant to Regulation 14 (4) of the 2017 EIA Regulations, the resultant ES being prepared by competent experts. WSCC had expected to see that the PEIR provided a Statement of Competence to this effect. WSCC expects to see this at the ES stage.
General	WSCC wants to see commitments to monitoring in the ES where required. It is recognised that monitoring is an important element in the management and verification of the actual proposed impacts. It is understood that the outline management plans, across a number of environmental topics, will be submitted along with the DCO application. It was expected a full list of these should be included in the PEIR as a minimum, and it would have been very helpful to stakeholders to see some draft outline documents, especially with the contractor on board as part of the design team.
Table 4.1	WSCC have not yet agreed to the LVIA methodology proposed, contrary to the statement within the table. In particular, WSCC has not commented on the criteria defined by National Highways for ascribing value and susceptibility to change to individual landscape and visual receptors.
4.2 and 4.2.3	It is also noted that the draft Order Limits seem to go outside of the indicative Scoping Boundary from March 2021; this should be confirmed by National Highways and any implications outlined in the ES.
General	Without undertaking a more transparent, detailed, and less preliminary assessment, it is unclear whether likely impacts from the proposals will be mitigated sufficiently. This also does not give confidence the design has been informed by the assessment work undertaken and the draft Order Limits are a ' <i>worst case land take</i> ', as currently stated in the PEIR.
4.5	The statement that a preliminary assessment has been undertaken and that it is considered (at this stage) there are unlikely to be any significant environmental effects associated with major events. This needs a clear evidence base presented to understand how this conclusion has been reached. WSCC would be concerned about any increase in flood risk, which would have the potential to impact local residents, and await the final FRA for comment further.
General	It is unhelpful that statements of significant effects are made without the transparency in the impact matrix scoring (sensitivity/importance and magnitude of effect which allows a significant or non-significant scoring to be concluded) and much is left to professional judgement without the necessary evidence base. WSCC expects a full transparent assessment to be undertaken for the ES.

General	The Scoping Report stated an intention to adopt a ' <i>landscape approach</i> ' to assessment in general; to ensure impacts to environmental receptors are understood in an integrated way. Despite this stated intention, there is poor integration between the different chapters. Given the scale of the development and its potential to impact on numerous different environmental factors, the importance of cross-disciplinary work cannot be overstated for this scheme and along with a robust CEA, must be further addressed in the ES.
General	There is inconsistency between the way construction and operational phase impacts are presented. For example, effects on heritage assets via change within setting; preferably within the construction stage; reference to the effects being ongoing and permanent should be made within the operation section.
General	The importance of the EMP is made in the PEIR. However, it would have been helpful to have a first outline draft of this document available as part of statutory consultation to give stakeholders confidence that measures and procedures will be defined and secured through the DCO. This must be presented as part of the DCO application.
<b>Chapter 5 - Air Quality</b>	
General	WSCC refers to comments also made by Arun District Council (ADC) with regard to air quality matters.
General	Reference should be made to ' <i>Breathing Better a partnership approach to improving air quality in West Sussex</i> ' (May 2018). WSCC and all West Sussex District and Borough Councils are committed to ensuring that the County is a healthy place to live.
5.1.7	The Scoping Opinion requested that PM2.5 assessment was included. The Environment Act 2021 indicates that Government is committed to setting a target for PM2.5. It is suggested that a PM2.5 assessment takes place in preparation for the Government target which may be introduced before a decision is taken on the DCO.
5.3.3	The air quality assessment is based on fixed traffic demand. Outputs from the variable demand model should be provided to confirm the location and significance of the effects on air quality.
5.3.6	The assessment of construction impacts on air quality is only qualitative. WSCC expects a quantitative assessment to be undertaken for the ES to allow for meaningful scrutiny of potential impacts.
5.8.5	Details of construction phase HGV movements have not been provided. A quantitative assessment should be provided to allow the impacts on air quality to be fully assessed.
General	Until the evidence base and further assessment has been provided and scrutinised by WSCC (including the required TA and construction phase information), likely levels of impacts cannot be predicted with certainty and required mitigation packages discussed.
<b>Chapter 6 - Cultural Heritage</b>	
6.1.2	The ES must include reference to geoarchaeological deposits.
6.1.5	WSCC questions why a fuller baseline assessment has not been produced for the PEIR. The baseline would obviously need to be updated for the ES with the results of the ongoing field surveys, to incorporate previously unrecorded archaeological/geoarchaeological

	heritage assets. However, the West Sussex Historic Environment Record (WSHER) data, supplemented by other sources such as Lidar, site walkover and desk-based research, is sufficient to produce a much more complete assessment of the historic environment baseline resource, and the archaeological potential along the route, than has been provided within the chapter.
6.1.5	It is not clear why a baseline assessment of significance (and the contribution made by setting) for designated heritage assets has not undertaken earlier in the DCO process. Such a baseline settings assessment should have been prepared in order to inform the process of scoping in/out of heritage assets and selection of viewpoints for the LVIA. Ongoing survey work is unlikely to change the assessment of significance of designated heritage assets (or non-designated built heritage assets). In the event that additional built heritage assessment work is planned in order to inform assessments of significance, a preliminary statement of significance for these assets could still have been undertaken for PEIR stage.
6.1.5	The significance of designated assets is touched upon only once in 6.8.6, points a-n; this comprises only a single-word assessment of value (high/very high) and only for those designated assets assessed as likely to suffer ' <i>potential significant effects</i> ' due to changes within their setting. No supporting qualitative statement of significance, in accordance with Historic England methodology, nor methodology setting out how value/significance has been assessed, is provided. WSCC would therefore very much disagree that ' <i>the significance of designated assets is considered within the PEI Report</i> ' as this has not been done in a consistent, meaningful, or transparent way. It's not clear why this exercise has not been carried out for designated assets at the very least.
6.3.1	The information required to produce a baseline and preliminary assessment of significance for designated heritage assets would have been available at the time of writing the PEIR and it is not clear why a draft version this has not been produced to draft/preliminary stage. Further justification is required.
6.3.3	The sources listed in Section 6.5, including full WSHER search, would be considered sufficient to inform the production of a fully detailed, if preliminary, baseline assessment for PEIR stage. With the results from ongoing surveys to be added for the ES. The baseline included here is much lighter touch, which is unhelpful.
6.4.2	The wider 5km study area for higher value assets is welcomed and necessary, especially in regard to the viaduct section, situated within the open floodplain landscape, likely to be prominent within longer range views from a number of heritage assets located at some considerable distance. WSCC expects to see this flexible approach extended. Consideration should be given to the creation of a bespoke ZTV generated specifically for the floodplain/viaduct section of the route, extending to 5km, and including designated assets of all grades. The purpose being to pick up any designated assets graded below II* (i.e., Grade II LBs; Registered Parks and Gardens) which might have long-range, designed views contributing to their significance which incorporate the Arun valley floodplain, and thus be affected by the scheme. Such heritage assets may well not be picked up by the current methodology.

6.5	In general, the baseline provides a well-written and concise narrative overview of the historical development of the study area. However, the level of detail is less than expected and is somewhat inconsistent in degree of detail (e.g., Bronze Age vs Iron Age sections), with some heritage assets recorded on the HER and located within the redline boundary not mentioned or mentioned only in passing as part of a wider monument class. The lack of WSHER reference numbers within the text means it is difficult to ascertain whether specific assets/finds/features have been included within the baseline or considered. For example, the reference to a Roman villa ' <i>at Walberton approximately 440 m south of the Scheme</i> ', as opposed to reference to the accepted identifier as per the WSHER, ' <i>Roman Villa site at Blacksmith's Corner, Walberton</i> ' (MWS8590).
6.5.9	See comment for 6.1.5
6.5.11	This statement is contradicted by 6.5.12, which discusses a number of Palaeolithic findspots recorded within the Study Area. Was the intention to refer to the lack of previously recorded Palaeolithic archaeological sites or features, of secure provenance (as opposed to findspots), within the Study Area?
6.5.16	The Avisford Grange Report was added to the WSHER in 2021; records suggest that the last WSHER search undertaken for the route was on 26/11/2020. The WSHER User Guide states that HER data should be held for a maximum of 12 months. The HER should have been consulted to check for recent updates prior to finalisation of the PEIR, at a minimum.
6.5.16	Although the results of the ongoing trial trenching have not yet been reported, the WSHER identifies a number of undated features identified from aerial photography and/or Lidar (the latter identified as a source from which this baseline was compiled). Accepting that any feature identified by such non-intrusive methods (such as the ring ditch identified in the 'golf course mitigation field', north-east of St Mary's Church Binsted, WSHER MWS15137) remains undated, these possible and probable features should be discussed within the baseline, within the most appropriate period section.
6.5.17	The baseline does not touch upon research questions for the area; WSCC expect the inclusion of such within the ES/baseline. Specifically for this period, WSCC would want to see discussion of the emerging evidence on the coastal plain for intensification of settlement, transport, and storage of goods during the late Iron Age/early Romano-British period. The findings from adjacent Avisford Park add to this body of evidence. Any potentially contemporary features from ongoing scheme field investigations should be discussed, and their significance assessed, in the context of this wider picture, which might elevate the significance of individual features/activity beyond a basic functional and period-based interpretation. Assessment of significance needs to consider the potential of previously unrecorded archaeological features to contribute to research questions relating to this transitional phase and changes in the landscape, settlement pattern, industrial and agricultural patterns, and transport network.
6.6.4	WSCC expects Pleistocene deposits of Palaeolithic archaeological/geoarchaeological potential, as well as historic landscapes to be included within this section of the ES.

6.7.2	A viaduct is likely preferable to an embankment in terms of both change within settings of heritage assets, and physical impacts (direct and indirect) to buried archaeological features and deposits. However, the design will be key. Any crossing of the floodplain will necessarily be elevated and highly visually prominent from a number of higher-grade heritage assets to a greater or lesser degree. Within the ES, a robust settings assessment and understanding of significance, the contribution of setting and the sensitivity to change of the affected areas will be vital to accurately capture likely impacts to sensitive receptors. This should include ensuring that mere intervisibility with the viaduct is not taken as a proxy for an adverse effect to significance, and likewise that non-visual effects are fully assessed. The option of lowering the vertical alignment of the scheme over the Arun floodplain would likely reduce the impacts upon heritage assets, in particular Arundel Castle. Further assessment work needs to be undertaken.
6.7.3	The intention to balance screening of intrusive views of the road with the need to preserve the current open landscape setting of the Church of St Marys (which makes a positive contribution to the significance of the Grade II* listed building) is welcomed. The success or otherwise of this balancing act will hinge upon the detailed design of the scheme although the potential for significant, permanent adverse impacts to significance remains high. The potential for substantial harm to this high value heritage asset has certainly not been ruled out, as the baseline settings assessment has not been undertaken. Further consultation with stakeholders is needed here.
6.7.4	It is encouraging to note that heritage has been considered in the drafting of the draft EMP. However, the same consideration does not seem to have been given to the siting of compounds and laydown areas; the location of several compounds seems likely to result in significant permanent physical effects to non-designated archaeological heritage assets, as well as temporary adverse effects to designated assets via changes within setting.
6.7.6	WSSC requests the terminology for investigations vs mitigation is checked e.g., <i>'a programme of archaeological mitigation and recording proportionate to the level of impact and the value of the assets affected.'</i>
6.7.9	The proposed use of ultra-low noise surfacing and lowered speed limit in the vicinity of St Mary's Church is welcomed. The exact locations of acceleration and deceleration around this zone, and how this interacts with the surfacing, need to be confirmed before the benefits/reduced harm of these mitigation measures can be accurately assessed.
6.8.2	The loss or truncation of the assets highlighted in this section as <i>'known assets that may be significantly affected'</i> is noted, and it is assumed this has been calculated on a 'worst case scenario' basis, although the methodology and evidence base for this assessment is not presented. In the absence of the baseline assessment to refine the presence, distribution, significance and likely impacts, this list causes concern. The principle of the loss or truncation of many of the assets listed here (a non-exhaustive list which does not include the results from the ongoing evaluation fieldwork) has not yet been agreed or justified as acceptable or unavoidable. In particular, items c, f, h, i and m will need further assessment of significance and likely impacts before the principle of their loss can be weighed in the 'planning balance' exercise.

6.8.5	The loss of Grade II Listed Morley's Croft should be avoided unless the success of the scheme hinges on its unavoidable removal (see paras 5.131 and 5.133 of the NPSNN). Its loss would certainly (as opposed to likely; the asset is identified as high value in 6.8.6 point j) be considered a significant adverse effect.
6.8.8	There can be a tendency when assessing construction phase effects to write non-physical temporary effects off, purely on the basis they are not permanent and irreversible. However, the 3-4 year duration of the construction programme means that, whilst temporary, these structures will comprise substantial fixtures in the landscape, with some degree of longevity. WSCC requests the effects of the scheme should be assessed in light of this.
6.8.9	The loss or severe truncation of a substantial prehistoric enclosure (identified during geophysical survey and confirmed via the preliminary results of the ongoing trial trenching) is proposed, in an area outside the route corridor, purely for the construction of a compound. It is not at all clear on the basis of the information provided that this potentially significant adverse effect upon a (previously unrecorded) archaeological heritage asset is unavoidable. In line with the intentions stated in this section, WSCC would expect to see greater efforts to minimise the impacts of compounds upon heritage assets; both above- and below-ground.
6.8.14	The magnitude of the beneficial effect upon heritage assets as a result of detrunking remains to be assessed; this will differ for different heritage assets. The benefit is likely to be greatest for those heritage assets currently identified as noise sensitive receptors along the existing A27. In the absence of the baseline settings assessment, it is not possible to state that a reduction in traffic will automatically result in a meaningful beneficial effect; it first needs to be identified the degree to which setting contributed to significance. Any asset that receives significant benefit from a reduction in traffic noise, may also be at risk of significant adverse effects due to increase traffic noise as a result of the new route alignment. Assessment work should ensure that harm and benefit is weighed fairly for the detrunking vs the new scheme.
6.8.15	In the absence of the baseline assessment work, it is not yet possible to make this assertion.
6.8.16	Even with the embedded mitigation of surfacing in the vicinity of the Church of St Mary's, Binsted, the change in setting and associated increase in noise, visual intrusion, change in character, loss of tranquillity, and severance of existing views, will still remain and will need to be robustly assessed in the ES.
General	<p>Trial trenching coverage for the scheme is generally excellent and the majority of route corridor and major impacts areas covered. However, the following exceptions have been identified:</p> <ul style="list-style-type: none"> <li>• South of Proposed Bridleway Overbridge (BR391), east of Copse Lane and Potwell Copse; the evaluated area did not include the south-east portion of the field; this area now appears within the redline, and the proposed tie-in with Copse Lane extends into this unevaluated area;</li> <li>• A parcel on land immediately south of Avisford Park House and east of Tye Lane was not evaluated;</li> </ul>

	<ul style="list-style-type: none"> <li>• Location of attenuations ponds either side of Binsted Rife, and laydown area, have not been evaluated; it is agreed that site and water table constraints make trial trench evaluation impractical, but note that this area has not been evaluated;</li> <li>• Land either side of Tortington Rife, within route corridor/works areas, not evaluated due to hydrological reasons;</li> <li>• Land SW of Binsted Lane (in vicinity of and south-east of Oakley's Barn), required for utilities diversions; not evaluated; and</li> <li>• There may well be the need for subsequent phases of trial trench evaluation, in the event that additional areas of impacts, especially for compounds, utilities, mitigation and access, are identified.</li> </ul>
General	<p>Due to the hydrological constraints of the floodplain and the deep overburden known to be present, effective field evaluation of the viaduct section of the route has been challenging, with Trial Trenching descope here as a result. The programme of geoarchaeological monitoring and investigations within this section of the route is welcomed. Care must be taken to ensure the archaeological potential of this section of the route is assessed fully beyond the assessment of geoarchaeological potential arising from the search work. The potential for in situ Pleistocene archaeological sites and features to be preserved at depth should be considered in addition to the geoarchaeological and paleoenvironmental potential. The inability to evaluate or mitigate this section effectively should not be used as justification for accepting the impacts of piling without clear justification; the areas of impacts along this section will be substantial and extensive, with cumulative impacts to any archaeological deposits or in situ features present at depth below alluvial deposits.</p>
General	<p>Assessment of significance of effects; the omission of the likely magnitude of effects is not helpful. The methodology states that in the absence of the detailed baseline assessment work, a '<i>worst-case scenario</i>' has been adopted for assessing likely significant effects. Table 6.2 assesses the likely permanence and whether the effect will be adverse or beneficial (following embedded mitigations). However, when assessing on a '<i>worst-case scenario</i>' basis, WSCC would expect to see a preliminary assessment of the magnitude/severity of potential effects. This could be expressed as a range, e.g., 'permanent adverse effect, likely minor to major adverse'. The current methodology serves to downplay where there is the likelihood for significant adverse effects. For example, the assessment for Arundel Castle, one of the major sensitive receptors for the scheme, is assessed only as; '<i>Permanent adverse effects associated with the visibility of the Scheme within the landscape setting of the asset</i>' and '<i>Permanent beneficial effect from removal of traffic from the setting of the asset during operation of the Scheme</i>'. In the absence of a likely magnitude of effect being provided, the impression is given that the (likely slight) beneficial effect of a reduction in traffic through Arundel may balance out the (likely more significant) adverse effects of the scheme upon this nationally significant heritage asset. The omission of assessment of magnitude of effect therefore gives a false impression of the likely significant effects of the scheme.</p>
General	<p>The assessment of cumulative impacts should specifically include a consideration of the piecemeal loss of non-designated archaeological</p>

	heritage assets on the Sussex coastal plain. Recent housing developments in the vicinity of the redline boundary (around Walberton and Binsted in particular) have identified further evidence for an apparently extensive landscape of multi-period prehistoric and Romano-British activity. The ES should assess how the scheme will impact archaeology which might form part of this emerging prehistoric landscape (with further evidence almost certainly forthcoming from the trial trench evaluation).
General	The location of the Yapton Lane compound will result in the total or partial loss of archaeological heritage assets identified during the recent geophysical survey and ongoing trial trenching. The character, date and significance of the assets has not yet been fully assessed, but they are likely to be of prehistoric to Romano-British date and of at least local to regional significance. Significance may be influenced in the case of a demonstrable relationship with features excavated at Avisford Grange, and with the Blacksmith's Corner Roman villa to the south of the route corridor. The loss of these archaeological features, located in land outside the route corridor, purely for the siting of a 'temporary' construction compound, has not been sufficiently justified. Alternative options for this secondary compound should be explored, and if none are viable, convincing justification should be provided to support this.
General	There is likely to be an impact from topsoil stockpiling areas, on the assumption that the existing topsoil in the areas will be removed prior to stockpiling, and that subsequent removal of the stockpiles has the potential for impact to buried archaeology. Any areas proposed for topsoil storage, or storage of other materials where topsoil removal will be required, should be assessed within the ES.
General	Whilst the impacts associated with the compounds and topsoil stockpiling areas are at least outlined in the PEIR, the referenced 'laydown areas' do not appear to be covered. It is not currently clear what, if any, groundworks will be involved, and if there may be archaeological impacts from laydown area. In particular, it is noted that a laydown area is proposed in close proximity to Tortington Priory Scheduled Monument; this is a potential cause for concern and may entail additional impacts during construction phase.
General	The location of the proposed access track for the attenuation pond south-west of the Church of St Mary's, Binsted, is of concern; there may be the potential for additional, avoidable impacts to the church due to additional changes within its immediate setting; details on the need for and design of this feature are expected in the ES.
General	The potential for additional impacts to the archaeological resource arising from off-site ecological mitigation/biodiversity net gain habitat creation is unclear. Any such off-site mitigation should be included within the ES assessment.
General	It is of concern that the LVIA appears to have considered the road corridor only in selection of viewpoint, and not included other areas of impacts. In particular, the field earmarked for the potential golf course relocation, east of the Church of St Mary's. The field has been included within the trial trench evaluation, but it appears that this area, as well as the temporary structures such as compounds, have not been included within the ZTV. Creation of a new 18-hole golf course within this arable parcel will introduce change into the settings of heritage assets above and beyond that caused by the road itself, in particularly

	to the Church and surrounds. The results of the trial trench evaluation indicate the presence of heritage assets of archaeological interest which might be truncated or removed. If this option is taken forward, there should be detailed heritage and archaeological impact assessment for the golf course re-provision, including settings. WSCC would also expect to see a ZTV and, if appropriate, viewpoints, for these additional areas of impact, not just for the main route corridor itself.
Table 6.2	The inclusion of Blacksmiths' Corner Roman Villa in Table 6.2 as a heritage asset likely to suffer 'Permanent loss or truncation of remains during construction of the Scheme' is of great concern. The villa is not located within the redline boundary for the scheme and its loss and/or the loss of any directly associated remains is not acceptable.  The villa is identified as asset A52; however, on Fig. 6.2, A52 lies north of Sunnyfield Farm and A53 appears to correspond to the villa's location. This and other asset numbers need checking for errors.
<b>Chapter 7 - Landscape and Visual</b>	
Figure 2.1	Details of the Preliminary Landscape and Environmental Masterplan (PLEM) for the Yapton Lane offline overbridge option are required.
Figure 2.1 (Sheet 1 of 6)	<ul style="list-style-type: none"> <li>• Woodland planting at (4). It is unclear how this planting assists with connectivity as it appears to comprise discrete parcels. Consideration should be given to ways of connecting new habitat so that it contributes to Green Infrastructure. WSCC request a Green Infrastructure Plan that illustrates connectivity between existing and proposed features;</li> <li>• Why are Ashbeds and land to west included within the red line? Can this area be used for further planting?;</li> <li>• 'Noise barriers' need to be included in illustrative sections and assessed as part of LVIA. Details of height and materials need to be included. WSCC requests consideration should be given to green solutions such as <a href="http://www.etsluk.com/">http://www.etsluk.com/</a>;</li> <li>• Locations of proposed hedgerows and tree lines should be informed by existing and historic landscape pattern and opportunities taken to restore historic field patterns where possible; and</li> <li>• More specific detail required on 'downgrading' of existing A27 is required including illustrative sections and inclusion in the LVIA.</li> </ul>
Figure 2.1 (Sheet 2 of 6)	<ul style="list-style-type: none"> <li>• The proposed 'layered landscape' needs to be informed by and respond positively to the existing landscape character including the historic landscape pattern;</li> <li>• Why is land to the east of Yapton Road compound within red line? WSCC requests this area is excluded if not required. Is Yapton Road compound shown to the correct size?;</li> <li>• Proposed linear tree belts, hedgerows and earth bunds and their locations need to be informed by an understanding of landscape character;</li> <li>• Proposals that have the potential to impact the historic and rural character of the Church of St Mary's, Binsted including the A27 (and associated planting, lighting, noise, bunds, and noise attenuation measures) and proposed golf course need to be carefully considered and informed by an understanding of</li> </ul>

	<p>landscape character. The proposal also needs to be factored into the LVIA and represented by viewpoints;</p> <ul style="list-style-type: none"> <li>• It is not clear if the attenuation pond will hold water permanently. WSCC would prefer this feature to contribute to biodiversity/ green infrastructure and be less engineered and more natural in shape. Consideration should be given to making sure access tracks are rural in character and do not have a suburbanising effect.</li> </ul>
Figure 2.1 (Sheet 3 of 6)	<ul style="list-style-type: none"> <li>• More details are required of the floodplain compensation area and how this is to be planted and maintained and its appearance and function outside of flood events;</li> <li>• Location and shape of proposed landscape elements (including attenuation basins, woodland extensions, planting, boundaries etc) needs to be informed by an understanding of existing character and historic landscape patterns; and</li> <li>• Why is the land north and south of Binsted Lane (to south of proposed A27) within the red line? WSCC requests this is removed if not required as part of the scheme.</li> </ul>
Figure 2.1 (Sheet 4 of 6)	<ul style="list-style-type: none"> <li>• Is the Ford Road compound shown to the correct size?</li> <li>• Temporary haul roads, storage areas, concrete batching plant (if required) etc need to be shown on plans;</li> <li>• Why is land south-west of Tortington Priory within red line? WSCC requests this is removed if not required as part of the scheme;</li> <li>• Proposed ditches for water vole receptor area need to be informed by local landscape character and historic field patterns; and</li> <li>• Details are required of how land reverting 'back to flood plain grassland' will be maintained are required.</li> </ul>
Figure 2.1 (Sheet 5 of 6)	<p>Are compounds shown to the correct size? Details of screening will be required and they will need to be assessed within construction phase of LVIA.</p>
7.2.3	<p>WSCC have been engaging with National Highways regarding LVIA methodology, including the location of viewpoints. Final agreement on the location of viewpoints and visualisations needs to be reached, which needs to include visualisations that show the proposed extension to the golf course, green bridges, compounds, haul roads, concrete batching plant, gantries, lighting, detrunking and factor into the LVIA all these additional elements which form part of the wider scheme.</p>
7.3.3	<p>States '<i>Further detail is given later in this chapter regarding the threshold for Residential Visual Amenity Assessment</i>'. This appears to be missing. WSCC expect this to be included in the ES and further discussions with stakeholders undertaken.</p>
7.4.5	<p>The preliminary ZTV is based on the centreline of the proposed highway at a height of 4.5m to account for lorries. The ZTV needs to also reflect other elements that may sit at above lorry height such as bridges, gantries etc and include development away from the immediate highway such as concrete batching plant, haul roads, compounds and the proposed golf course, all of which have the potential to cause visual impact.</p>
7.5.1	<p>The landscape assessment needs to examine all the aspects that contribute to landscape character as set out in GLVIA, which includes:</p> <ul style="list-style-type: none"> <li>• (5.4) including: – physical influences – geology, soils, landform, drainage, and water bodies; – land cover, including different</li> </ul>

	<p>types of vegetation and patterns and types of tree cover; – the influence of human activity, including land use and management, the character of settlements and buildings, and pattern and type of fields and enclosure;</p> <ul style="list-style-type: none"> <li>• the aesthetic and perceptual aspects of the landscape – such as, for example, its scale, complexity, openness, tranquillity or wildness;</li> <li>• the overall character of the landscape in the study area, including any distinctive Landscape Character Types or areas that can be identified, and the particular combinations of elements and aesthetic and perceptual aspects that make each distinctive, usually by identification as key characteristics of the landscape; and</li> <li>• (2.19) Character is not just about the physical elements and features that make up a landscape, but also embraces the aesthetic, perceptual and experiential aspects of the landscape that make different places distinctive.</li> </ul> <p>Where the landscape character assessments mention key views, these too must be taken into consideration in the landscape assessment as they contribute to the landscape character and can be affected by development.</p>
General	Appears to be no reference to Historic Landscape Character in the LVIA. There needs to be discussion of disruption to any historic field patterns caused by the proposals.
7.5.7	Turner's many views of the Arun and Arundel should be referenced as valued views in the visual assessment: <a href="https://www.tate.org.uk/art/artworks/turner-arundel-castle-on-the-river-arun-d18140">https://www.tate.org.uk/art/artworks/turner-arundel-castle-on-the-river-arun-d18140</a>
7.5.24-27	<p>Clarification requested in comments by WSCC on 1.7.21 (included below) regarding selection of LLCA and their key characteristics is still outstanding:</p> <ul style="list-style-type: none"> <li>• There is no explanation of the characteristics identified that make each of the 26 Local Landscape Character Areas' distinctive from the others, other than the comment that "we have reviewed existing landscape studies and identified local LCAs at a scale appropriate to the scheme corridor and reflecting changes in the landscape". Verbal explanation from TR suggested that information from all the published LCAs at national / county / district and SDNP level have been collated and updated in order to define the 26 LLCAs. However, if LCX have misinterpreted any of the published studies, then their evidence baseline will be erroneous; and</li> <li>• This analysis of the landscape context should be used as an important driver for design, and it will therefore be important that all stakeholders get to see the technical work in order to verify that LCX have not misrepresented the 'parent' LCA studies. WSCC therefore request this information/evidence is presented to the environment subgroup attendees ahead of the PEIR being published, to provide timely feedback into the process.</li> </ul>
7.5.40.b	<i>'Not consider views from parts of recreational routes that would be closed during the construction phase'</i> . It is unclear if this refers to not assessing in the 'construction' assessment routes that will be closed in that period or any PRoW that will be closed.

7.5.40.c	WSSC requests that residents of Avisford Grange development should be included as receptors in future baseline.
7.5.40 Visual d	WSSC requests the impact of reflected light on windscreens is undertaken as part of the required assessments.
General	Should include reference to valued views as depicted in JMW Turner's views of Arundel referenced in 2b 7.5.7
7.6.4. Planting b	Planting should respect the existing landscape character and historic landscape pattern. Introducing uncharacteristic woodland blocks or screen planting could undermine landscape character. Species selected need to be the native species for example <i>Populus nigra ssp. betulifolia</i> .
7.7.19	If views across the proposals are a key characteristic of the SDNP LCA, then these should be assessed as a landscape characteristic. The SDNP viewshed study should be referred to: <a href="https://www.southdowns.gov.uk/wp-content/uploads/2015/10/Viewshed-Study-Report.pdf">https://www.southdowns.gov.uk/wp-content/uploads/2015/10/Viewshed-Study-Report.pdf</a>
Table 7.3	'After the implementation of the EMP, no further mitigation is likely to be required.' Without an early draft EMP available (to assess what measures will be included) or a LVIA, design changes and additional mitigation cannot be ruled out.
Response to email from Charlotte Williams on 6.1.21 – Viewpoint consultation	WSSC wants the following viewpoints to be included for assessment within the LVIA: <ul style="list-style-type: none"> <li>• Tye Lane adjacent to Harvest House;</li> <li>• Views from the cemetery, London Road adjacent to St Phillips Catholic Primary School;</li> <li>• Footpath 241, south of Pedler's Croft; and</li> <li>• Several more along the route of the existing A27 to consider the visual effects of de-trunking (including at its connections with all PROW's and roads... Mill Road, Tye Lane, Shellbridge Road, Yapton Lane, Binsted Lane (at Threecorner Wood), Binsted Lane (at East and West Lodges), Jarvis Road, Bridleway's 397, 3667, 386, Footpaths 388, 3400, 347, 3067, 346, 348, 2207, and also on the Arundel Relief Road (across the watermeadows), and The Causeway (by Arundel station), and on the hill to Crossbush (between both parts of Crossbush Lane)</li> </ul>
General	Illustrative sections are required to understand the proposals in more depth and their impact especially with regard to roadside planting, screening, viaduct, green bridges, highways lighting, gantries and signage, junctions, cuttings and embankments, acoustic fencing, bunds and basins, compounds, haul roads, golf course redevelopment, Yapton bridge, detrunking, etc. These should show nearby built form, indicative vehicles and pedestrians for scale. Elevational drawings will also be required to show the appearance and scale of bridges, viaduct, gantries, acoustic barriers etc and help understand fully their likely impact. Viewpoint photographs or photomontages should have been included. The flythrough is helpful but more visualisations are required for the DCO submission.
<b>Landscape and Visual Baseline (Appendix 4c)</b>	
14	WSSC expects that the proposed tree planting reflects the existing character and degree of openness/enclosure. Tree planting to screen the proposal could have a negative impact on the landscape character.

57	b. <i>"Clear views to the higher ground of the Downs to the north"</i> are a key characteristic of LCA SC8 and impacts on them should be assessed as part of the landscape assessment.
60	j. <i>"Key close dramatic views of Arundel (castle, Roman Catholic cathedral, parish church, clustered hillside housing) from the south"</i> . k. <i>"Seaward views from elevated positions"</i> . l. <i>"Long views of river valley towards the Chalk Downs and Arundel from the south."</i> These are all key characteristics of LCA SC10 and impacts on them should be assessed as part of the landscape assessment.
100	Final location and number of viewpoints and location of visualisations needs to be agreed with stakeholders, including WSCC.
101	VP 23 is shown on HE551523 as a location for a type 4 visualisation but does not appear in table 7-A-2. Orientation of VP 29 is incorrect on plan.
<b>Chapter 8 - Biodiversity</b>	
8.2.3	This section is misleading. These three Focus Group meetings in 2021 did not address biodiversity specifically and no WSCC ecologist was present.
8.3.1 b and c	The ecological assessment is ongoing and the full results of the ecological surveys will be reported in the ES. WSCC requests the completed ecological survey reports ahead of DCO submission, if possible, and for a programme of when each ecological survey will be completed and made available.
8.3.2	It is not possible to provide detailed comments on the PLEM and the likely effectiveness of embedded mitigation measures without seeing the ecological surveys upon that decisions have presumably been based. e.g. without seeing the bat survey data, notably bat flight paths, it is not possible to provide meaningful comments on the locations chosen for the green bridges. Likewise, without seeing the reptile survey reports, it is not possible to comment on the location and extent of proposed reptile habitat required for reptile receptor areas. Some general comments are given below: <ul style="list-style-type: none"> <li>• Avisford Park Golf Course: three ponds within the road footprint will be lost and it is proposed to create replacement ponds within the golf course but in close proximity to the new A27. Given that trunk roads are a significant hazard to amphibians, it is recommended that the replacement ponds should be at least 250m from the road;</li> <li>• The new attenuation pond shown to the west of Binsted Rife, just south of the proposed A27, appears very artificially 'planted' in this floodplain. WSCC requests this is designed to be more natural and managed to enhance the biodiversity of the rife floodplain;</li> <li>• The watercourses, including Binsted Rife and Tortington Rife, are extremely important features in this landscape. Their routes are not easy to identify on this plan. WSCC expects these to be highlighted and labelled in the ES;</li> <li>• Flood compensation storage areas should be better integrated into the landscape so they can function more naturally and as a result provide benefits to biodiversity;</li> </ul>

	<ul style="list-style-type: none"> <li>• Binsted Lane overbridge: The T-junction road arrangement immediately to the north of the bridge, plus associated embankments, present considerable barriers to the movement of animals. Thus, this design does not appear conducive to encouraging animals to use this 'green bridge';</li> <li>• All the proposed mitigation measures shown on this PLEM are within the Draft Order Limits. Given that the scheme will have major adverse ecological impacts, including habitat severance, stretching across a much broader landscape, mitigation measures will need to extend into the wider landscape. Presumably there will be substantial off-site mitigation and compensation measures. They should all feature on this PLEM;</li> <li>• WSCC assumes there are ecological surveys of the sites identified for construction compounds. It is difficult to comment on the choice of sites without access to the supporting ecological surveys. Clarification is needed whether these sites will be returned to their former use or used for habitat creation.</li> </ul>
8.3.3	Evidence (best practice guidance or scientific research) is needed to support the chosen design of the 'green bridges' at Binsted Lane and Tortington Lane. Is there confidence that they will function as green bridges for wildlife as well as their use by vehicles, pedestrians and horses? Are the two 'green bridges' sufficiently wide given their multi-functional use?
Table 8.1	A Phase 1 Habitat Survey of all habitats within 100m of the centreline of the scheme was undertaken in 2020/21. This seems a very narrow corridor given that this survey will need to inform mitigation, compensation and enhancement measures both during the construction and operational phases. Furthermore, site compounds, storage areas and temporary access routes would need to be included in the Phase 1 Habitat Survey.
8.5.43	This is subject to review, as the woodland surveys are currently not available. As highlighted in 8.5.38, the Ancient Woodland Inventory did not include sites of less than 2ha. It is possible that the recent surveys will identify further areas of ancient woodland.
8.5.45	Every effort should be taken to retain ancient and veteran trees through the route alignment and engineering design.
8.6.5 and 8.7.10	The green bridges may, depending on their design, location and landscaping, provide some habitat connectivity but it is a very bold statement to suggest that they will maintain north-south habitat connectivity across the new road. Evidence is required to support this claim.
8.6.27	Another potential enhancement measure could be to enhance the nine ponds within the Study Area, all of which are of limited diversity (See 8.5.67).
8.7.8	It is stated that ' <i>Lighting is only being incorporated into the Scheme design where it is essential for safety reasons.</i> ' Given the significance of the area for bats, in particular, lighting is a very sensitive issue. The Lighting Strategy will require significant ecological input.
<b>Chapter 9 - Geology and Soils</b>	
General	There is no detail or evidence base presented about the amount of land affected during construction and operation, or the sensitivity and value of that land (ALC and soil surveys not undertaken). A basic

	assessment of the overall likely footprint for construction and operation of land needed would have aided clarity of the findings. There is also a lack of mitigation measures proposed, (such as that to be contained within the Soils Management Plan (SMP). WSCC expects to see this level of detail within the ES.
9.9	How will the potential footprint be affected if the viaduct height was lowered, as outlined in Table 2.1, and would this lead to increase land take and potential environmental impacts?
9.9.3	WSCC expects to see an assessment of the golf course re-provision area fully assessed within this chapter.
<b>Chapter 10 - Material Assets and Waste</b>	
10.1.7	Reference to JMLP is not correct, this should read Joint Minerals Local Plan July 2018 (Partial Review March 2021).
10.2.1	It is not clear when further consultation with WSCC as Minerals and Waste Planning Authority will take place. This should take place in advance of submission of the DCO application.
10.4.3	This para states, ' <i>The study area for alternative materials (secondary and recycled aggregates) is the southeast England region (comprising Berkshire, Buckinghamshire, East Sussex, Hampshire, Isle of Wight, Kent, Oxfordshire, Surrey and West Sussex), as set out within LA 110 (Ref 10-1)</i> '. WSCC welcomes reference to the use of alternative, recycled and secondary aggregates. Primary aggregates are a finite resource; therefore, the use of recycled and secondary aggregates should be prioritised where possible. Although it is accepted that materials can be sourced from a wide geographical location, onus should be on sourcing materials as locally as possible to limit the distances that HGVs travel.
10.5.8	WSCC welcomes that the safeguarding guidance has been referenced, and that National Highways have noted that safeguarded sharp sand and gravel is present within the draft Order Limits.
10.5.20	WSCC is due to publish an updated AMR (2020/21) in February 2022, that will be available on the WSCC website - <a href="https://www.westsussex.gov.uk/about-the-council/policies-and-reports/environment-planning-and-waste-policy-and-reports/minerals-and-waste-policy/monitoring-reports/">https://www.westsussex.gov.uk/about-the-council/policies-and-reports/environment-planning-and-waste-policy-and-reports/minerals-and-waste-policy/monitoring-reports/</a>
10.8.4 - 5	Although there is reference to sharp sand and gravel safeguarding, there is no further information provided, and instead an explanation of where no significant effects are expected.
10.8.8	Although the target for use of recycled aggregates is 26%, based on national guidelines, National Highways should strive to achieve a higher target.
10.8.13	Regarding the potential impacts on the Stubbs Copse waste facility, the PEIR states ' <i>The construction of the Scheme is not expected to directly impact the operation of this waste management facility due to the limited extent of the construction works required within the waste infrastructure consultation area. Therefore, no significant effects are anticipated</i> '. It is important the thorough consideration is given to ensuring that any activities do not prevent or prejudice the operation of the waste site.

General	<p>WSCC welcomes reference to the Minerals Local Plan, Waste Local Plan, and Minerals and Waste Safeguarding Guidance. WSCC is concerned however, that there is no detail provided on how safeguarded minerals and waste resources/sites will be considered, beyond reference to the EIA and to further consultation (set out in para 10.2.1).</p> <p>WSCC expects to see a Waste Infrastructure Statement focusing on Stubbs Copse, in line with the safeguarding guidance, to demonstrate that the waste site is not prevented or prejudiced in its operations. This should include consideration of the existing vehicle movements to/from the site.</p> <p>WSCC would like to see a Mineral Resource Assessment, to ensure that needless sterilisation of minerals (safeguarded sharp sand and gravel) does not occur. One way to prevent needless sterilisation occurring is through prior extraction, which is detailed in the safeguarding guidance, and would be welcomed.</p> <p>Consultation with WSCC, as Minerals and Waste Planning Authority, allowing time to consider any assessments undertaken by National Highways, should take place in advance of submission of the DCO application.</p>
10.8.11	<p>This states '<i>worst-case scenario requiring the disposal to landfill of 95% of earthworks cut material has been assessed, comprising approximately 513,000 m<sup>3</sup> of material for disposal (assuming a bulking factor of 1.2). This quantity of material equates to approximately 0.81% of total regional landfill capacity</i>'. WSCC expects this figure to be considerably lower and a clear strategy following the waste hierarchy should be presented, including a Strategic Waste Management Plan as part of the ES.</p>
10.3.2	<p>This states '<i>Data on the type and quantity of materials required to construct the Scheme, and the type and quantity of waste generated from Scheme construction, are not currently available</i>'. WSCC requests this data is made available, as it is not possible to make any assessment without it.</p>
<b>Chapter 11 - Noise and Vibration</b>	
11.2.2	<p>WSCC welcomed consultation on the baseline monitoring locations and methodologies for noise. As stated in an email from WSCC in August 2021, a clearer narrative is required with regard to baseline noise locations and whether temporary construction compounds, haul routes, batching plant etc have been taken into account when deciding upon likely monitoring positions as well as the route itself. Clarification is also needed regarding ecological/built heritage assets considered as potential locations at this stage.</p>
11.3.1	<p>WSCC raised concerns that details of the construction traffic, diversion routes, construction schedule, construction methodology and plant requirements are not yet confirmed. Therefore, a qualitative assessment has been carried out at this stage, based on professional judgment and experience of other nationally significant road schemes, of the likely noise and vibration effects of the activities described in Chapter 2: The Scheme, following the application of best practicable means to minimise noise and vibration levels. Little meaningful feedback can be given by stakeholders until quantitative assessment has been undertaken and the impacts of construction traffic on noise sensitive receptors without details of the volume and routes (and their proximity to noise sensitive receptors) that are proposed to be used.</p>

11.3.2	This paragraph refers to a validated traffic model of the local region. Details must be provided of the model and validation in a Local Model Validation Report (or similar technical documents). Feedback cannot be made on the outcomes of the preliminary operational phase noise assessment until certainty and scrutiny on the traffic modelling upon which it is based has been undertaken.
11.5.3	A much clearer detailed table of non-residential NSRs should be included and mapped for the purposes of assessment.
11.6.3	Traffic may redistribute during the construction phase to avoid delays resulting in temporary impacts that it has not been possible to assess. Please provide details of likely traffic re-routing onto alternative roads during construction and associate temporary noise impacts.
11.9.5	Further evidence is required to substantiate the conclusion that the offline option for Yapton Lane is better in noise terms. The number of properties that would benefit from the reduction in noise due to the offline overbridge is quite small compared to those in Avisford Grange that would benefit from a deeper cutting. It is not possible to fully assess this and provide informed comments without a more detailed assessment.
<b>Chapter 12 - Population and Human Health</b>	
General	There has been no consultation since the Scoping Stage with WSCC regarding health and wellbeing and any methodologies to be used to undertake Health Impact Assessment work, or Equality studies. As stated in the NN NPS, National Highways needs to <i>'identify measures to avoid, reduce or compensate for adverse health impacts, as appropriate'</i> . Clarity is required on the human health impacts for both the construction and operational stages of the scheme. No detail on the potential impacts upon the determinants of human health have been provided, or on the level of land take required which may impact upon private/residential properties. Therefore, further consultation will be required through the next stages of the scheme development.
12.3.3	The PEIR states <i>'where the Scheme cuts across a walking, cycling or horse-riding route, endeavours will be made where possible to ensure that all routes are kept in place by offering safe and well-planned diversions during the construction phase. At this stage, it is not possible to confirm the length of time that each route would be temporarily closed'</i> . WSCC is concerned that no detail on the construction phase impacts to PRoWs has been included, and consultation on a draft Public Rights of Way Strategy (PRoWS), which outlines these details should be undertaken as part of the next stages of the scheme. The timescales should be clarified as the process goes on, but possible alternatives should also be assessed as to their suitability because this comment is vague and gives no confidence mitigation is going to be suitable to try to accommodate lawful public use during construction where possible to reduce the impact on PRoW users for the estimated three year duration of construction.
12.3.3	No NMU surveys or WCH Assessment Report (WCHAR) have been presented as part of the PEIR. Concern is raised about the statement on frequency of use of WCH and its indicator of the recreational value of a route. These routes may be used in a limited manner due to the difficulties in crossing the existing A27. A WCH Assessment Report should therefore be provided for consultation with stakeholders.

12.5.59	The road safety performance across large administrative areas (district, county etc) do not necessarily reflect what is happening on the section of A27 that is expected to be bypassed or the area of scheme influence. More detailed analysis is required of the road safety performance in the area of influence of the scheme and a quantitative assessment of the likely benefits in a Transport Assessment.
Specific comments on PRowS	<p>Some further queries on specific routes are given below:</p> <ul style="list-style-type: none"> <li>• BW392 - in principle support proposal for a NMU route, and welcomes the inclusion of this crossing the existing A27 route.</li> <li>• FP350 - currently provides good and well used access for walkers directly from Walberton across to the Church of St Marys and then on into the SDNP. Further clarity on the detail is needed, concern is raised about the user experience with the path proposed to be realigned under the new road, including drainage and lighting concerns. WSCC requests discussions on whether upgrading of this route from footpath to Bridleway is possible, as it offers a good off road access between Yapton Lane and Binsted Lane. Section 12.8.42 mentions a new PRow that connects to the existing PRow 350 footpath, which would provide a connection to Binsted Lane, further detail is needed.</li> <li>• FP354 - proposal in principle supported for grade separated crossing of new road but need to consider access up slope on southern side of road and mitigation to meet DDA compliance where possible. Also as this bridge will be carrying vehicular traffic as well, how is NMU traffic being safely accommodated alongside this vehicular traffic?</li> <li>• FP3403 - this is quite a big diversion and changes route from off road to on road for some of the journey, albeit a quiet road with access traffic to properties. How is this pedestrian route being accommodated alongside vehicular traffic and is there a provision for pedestrians to link to FP3401 from the proposed diversions northern end?</li> <li>• FP206 - appears to be no material change to the line but it is an aspiration of Arun DC to upgrade this footpath to Bridleway in the future so this needs to be considered when designing head clearance over this route so it is future proofed.</li> <li>• FP2207 - in principle support the grade separation from the proposed new road.</li> <li>• Further discussions are needed on how the scheme could tie in with WSCC's Lyminster Bypass near Crossbush. Pedestrian, equestrian and cycle access is desirable and would be interesting to consider how these two schemes can tie in and provide access south.</li> <li>• Also there is potential for upgrade of FP2189 to Bridleway to create an NMU facility east from Crossbush to tie in with existing network.</li> </ul>
12.6.7	A PRow strategy would be beneficial for the whole project, setting out general principles around providing access throughout construction where possible and when this is not, how access can still be retained along alternative routes. Long term closures for up to three years will have a very negative impact on local communities and recreational access to the SDNP, so a clearer plan of action is required setting out how this will work.

12.8.2	Full assessment of permanent land take and loss of properties to residents on Binsted Lane is required, including the detrimental impacts to occupants and owners.
General	The assessment seems light on detail and WSCC would recommend reference to the iPROW paper titled " <i>Environmental Impact Assessment: Appraising Access</i> ".
General	Without detailed assessment, whether there will be ' <i>significant benefit for walkers, cyclists and horse riders as part of the Scheme</i> ' is yet to be demonstrated. There is very little in the way of new routes specifically for NMUs, and there are opportunities to go further than the current scheme. Those identified have been provided either because the original alignments needed to be diverted or mitigated for because of the bypass or they are provided in short sections where without separate provision, users would be required to share road space with vehicles. Apart from the new bridleway bridge over the existing A27 there are no details about the approach to detrunking. Provision for walking, cycling, and horse riding would potentially have a large impact in terms of increased uptake of active travel amongst local communities.
12.8.6	WSCC raises concerns regarding the potential impact of both the construction and operational phases of the proposed scheme upon Walberton and Binsted C of E Primary School. Concern is raised regarding not only the close proximity of the new bypass alignment and its construction, but also the potential redistribution of traffic during the operation of the scheme and its effects upon road safety. The PEIR gives no detail upon specific impacts and lacks any detail in relation to proposed mitigation measures. WSCC would expect the school site to comply with the relevant Department for Education Building Bulletins e.g. BB103 (Area Guidelines for Mainstream Schools) and mitigation must be in place to ensure those requirements and especially around noise and air quality are met. Further consultation is therefore required with WSCC and the school itself during the next stages of the project, to ensure any anticipated adverse effects are appropriately mitigated. Not all facilities have been included here. There is also the Walberton Community Play Centre, Walberton Pre-School and Walberton Playgroup in the vicinity, and all need to be considered within the assessment.
12.8.32	WSCC expects a wider analysis of the economic impacts of the proposed scheme and the extent to which it will address challenges around the competitiveness of the coastal economy including productivity, access to customer and labour markets, attractiveness of the area for business growth and entrepreneurship, access for visitors to the coast and the South Downs National Park, and the regeneration of coastal towns.
12.8.34	WSCC query why no locations in Walberton area are at risk of temporary adverse impact due to dust emissions. Is this an error?
12.8.43	There appears to be provisions to cross the new road with overbridges but these are likely to be highway assets and not PROW as they will run alongside vehicular carriageway. This issue needs to be considered carefully so the provision is suitable and does not deter users travelling so close to vehicular traffic.
<b>Chapter 13 - Road Drainage and the Water Environment</b>	

General	There is no mention of the 'Lower Tidal River Arun Strategy (LTRAS)', which is an EA study of the lower sections of the River Arun and covers the Arundel area. Consideration should be made to this strategy.
General	Detailed ground investigation and ground water monitoring have yet to be completed; therefore, the potential impacts have been considered qualitatively within the current assessment. WSCC wants further consultation on these matters once the assessment is developed.
13.3.2	Flow gauging, water quality sampling, aquatic ecology and hydro morphological walkovers have and are still being undertaken. WSCC would like to see the same level of monitoring continue during and after the construction work is complete.
13.5.81	A number of private water supplies have been identified. Are any of these outside of the EA's Source Protection Zones? What, if any, level of monitoring will be in place during the construction to ensure these water supplies are not affected during the construction phase?
General	A detailed Flood Risk Assessment has yet to be carried out. Therefore, WSCC request consultation on this document prior to the DCO application being submitted.
13.5.96	WSCC are not aware of any areas of emerging groundwater within the study area, when local groundwater levels are high. However, WSCC understands this does happen along other sections of the A27, so needs to be considered.
13.5.111	This refers to historic flooding in Barnham, but it does not mention the late 1990s event when the culvert under the road and railway became blocked leading to property flooding at the time. Can National Highways confirm if the date in the report is wrong and it should read 1998, not 1968?
13.6	Although the temporary impact that construction can have on the water environment is discussed, controls are not outlined. WSCC has witnessed in recent years significant uncontrolled silt run-off from major construction sites and the damage it has done to the local water environment. Therefore, it is important that these issues are considered and suitable controls put in place during the construction phase. The culverting of minor watercourses is discussed. This work will require 'Ordinary Watercourse Consent' from Arun DC and culverts should be a minimum of 450mm diameter.
13.6.8	WSCC notes this section identifies three non-linear surface water features, although four are listed.
13.6.12	This section states that ' <i>piles have the potential to interrupt groundwater flows</i> '. Current best practice should be followed to limit this effect, and further discussion and engagement will be required with relevant stakeholders to ensure method statements and relevant mitigation is put in place.
13.6.21 and 3.7.4 (h)	This section states ' <i>there is the potential for operational drainage discharges to alter the flow regime of receiving watercourses and to impact upon water quality</i> '. These issues need to be considered carefully as increased flood risk and/or pollution would not be acceptable. It is noted that the 'Design, mitigation and enhancement measures', section 13.7.4 (h) contradicts this statement, stating that there will be no increase in flood risk or run-off rates.

General	It will be important that a robust maintenance plan is put in place following construction and all third-party responsibilities are identified.
General	Special consideration during the design stage needs to be given at camber/topography changes to avoid the risk of cross carriageway flow leading to aquaplaning/reduced visibility due spray hazard. Also the placing and maintenance of gullies in low spots which are likely to block due to high levels of leaf fall should be carefully considered through the design process.
<b>Chapter 14 - Climate</b>	
14.1.3	The chapter needs to refer to the draft West Sussex Transport Plan (WSTP) 2022-2036 (currently post-public consultation) <a href="#">West Sussex Transport Plan Review - West Sussex County Council</a>
14.1.3	The West Sussex Plan 2017 – 2022 is superseded. The current one is 'Our Council Plan 2021 – 2025' <a href="#">Our Council Plan - West Sussex County Council</a>
14.3.20/ 24	WSCC cannot make comment without scheme specific data, for example, the preliminary Green House Gas (GHG) assessment. There is a lack of construction emissions data, which along with all the required construction information would give stakeholders more confidence about the construction phase. WSCC expects to see all these documents in draft form before the DCO submission in order to comment and provide a meaningful response.
14.3.23	Without seeing a draft version of the EMP and associated documents (such as the construction worker travel plan) WSCC cannot have certainty that aspects will be covered and therefore secured through the consenting process. A draft version, along with a commitments register, should have been forthcoming as part of the consultation.
14.3.23	WSCC requests that this is split and more clarity provided. The examples of emission mitigation are helpful, but the co-benefits of re-use of material arisings is not the same as the inclusion of a green bridge or the provision of EV charging points.
14.3.23	WSCC requests details of proposed EV charging points on this stretch of the road, and clarification of why drivers would stop on this stretch (which should be flowing), rather than charging points be increased at Fontwell or at Crossbush. WSCC would welcome charging infrastructure that complement the <a href="#">EV Strategy</a> and <a href="#">recent contract award</a> for EV charging countywide.
14.3.24	With regard to the Net Zero Highways Plan, WSCC would like to see how this scheme specifically contributes to the ambitions of Net Zero corporate emissions by 2030, being Net Zero for maintenance and construction by 2040 and Net Zero carbon for travel on roads by 2050. This is not spelt out clearly in the report.
14.3.28/14.3.35	WSCC acknowledges that the emissions from this scheme may only be 0.1% of the overall UK budget, but from a cumulative perspective, every scheme has a part to play. Information on this scheme's potential to be a 'Near Zero' scheme could be presented and considered.
14.3.31	WSCC is disappointed that the ES assessment is not presented in a preliminary form and WSCC would expect to see draft assessment work before submission of the ES.

General	No reference is made to the <a href="#">WSCC Climate Change Strategy</a> - the Authority has an ambition to be both carbon neutral and climate resilient to 2030. Although the Strategy is about WSCC's local actions, many of the West Sussex Local Authorities have similar ambitions and it would be helpful to understand how this nationally important scheme aligns with the delivery of these collective ambitions at the local level.
14.4.13	WSCC expects to see more localised data if stations exist. WSCC requests that a longer-term data range is considered, to reflect the more recent variation in climatic extremes. It is proposed that a <a href="#">Local Climate Impact Profile</a> (LCIP) could be useful to inform this. It is requested that National Highways consider funding the preparation of a scheme-specific LCLIP. (WSCC has one 1998-2008 but not published - available on request).
14.4.28 and 14.4.36	WSCC expects to see reference and consideration given to drought, given the southeast status as water-stressed. National Highways is requested to check the impact of water neutrality on the scheme proposal. <a href="#">Map showing the Sussex North Water Resource Zone in West Sussex (document unsuitable for assistive technologies)</a>
14.4.29	No detail is provided on adaptation measures. While 14.4.31 provides suggestions on mitigation, it is contradictory as a green bridge is not a mitigation (emission reduction) measure. There are no suggestions provided for adaptation. WSCC requests that proposed adaptation measures are provided for consideration, for example, alternative highways surfacing. Further reference to LA114 would be beneficial (referred to in 14.4.38) with more detail.
General	WSCC would like to see clearer references to carbon off-setting. WSCC's preference is for on-site (insetting) where possible, to achieve widest benefit, further details should be provided.
<b>Chapter 15 - Cumulative, In-combination and Project-wide Effects</b>	
15.2.5	WSCC requests clarity on the cut-off point for developing the CEA prior to DCO submission. WSCC should be consulted on the development of the long list of CEA projects to be taken into consideration.
15.2.7	Many of the assessments are based upon the forecasts derived from the traffic modelling, which is why the lack of any documentation outlining this modelling is unhelpful. Further consultation on these topics is expected.
General	WSCC expects to see any impacts caused by direct interaction between planned projects (such as Rampion 2 onshore cable route, if this is likely to interact) mitigated, which could involve joint working method statements if required. Further assessment of potential impacts of these projects should be undertaken with the ES.
15.3	There is potential for both adverse and beneficial in-combination effects associated with the scheme. Clearer assessment is needed on the in-combination effects of multiple adverse impacts upon any one individual receptor, especially those sensitive receptors in close proximity to the route.