

A57 Link Roads

TR010034

**9.51 Written summary of Applicant's case
at ISH2**

Rule 8(k)

Planning Act 2008

Infrastructure Planning (Examination Procedure) Rules 2010

February 2022

Infrastructure Planning

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The Infrastructure Planning (Examination Procedure) Rules 2010

A57 Link Roads Development Consent Order 202[x]

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Rule Number:	Rule 8(k)
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1. Introduction

1.1.1. This document summarises the case made orally by National Highways, as the promoter of the A57 Link Roads scheme (the Scheme), at the second Issue Specific Hearing (ISH2) which took place virtually on 9 February 2022, at 10:00 and continued on 10 February 2022.

1.1.2. Vicky Fowler and Richard Thurling of Gowling WLG represented National Highways and were supported by the following experts:

- Item 2 - Adam Lawrence
- Item 3 - Steve Katesmark
- Item 4 - Graham Woodward
- Item 6 - Liz Young
- Item 7 – Susie Robinson
- Item 8 – Jo Thorp

1.1.3. This document sets out National Highways submissions on the points raised following the agenda for the CAH1 as set out in the Examining Authority's (ExA) agenda published on the Planning Inspectorate website on 31 January 2022.

1.2. Agenda item 1 – Welcome, Introduction and arrangements

1.2.1. No questions of an introductory or preliminary nature were raised by the Applicant or by other attendees at the ISH2

2. Item 2 - Noise and Vibration

Response reference:	Representation Issue	National Highways Response																	
Item 2	<p>NOISE AND VIBRATION</p> <p>Study area, baseline conditions and overall assessment methodology</p> <p><u>Footpaths</u></p> <p>The Applicant [REP2-021 Q9.2] has identified changes in noise to public rights of way, but has not identified the effects or their significance.</p> <p>a) Please could the Applicant provide a noise impact assessment for public rights of way 50, 51, 52, 87, 88, 90 and 108? In each case, please set out the details of the assessment in accordance with methodology and identify the significance of any impact. In each case, please also set out changes in the perception of noise arising from changes to landscape or setting and how that has been considered in the assessment. Should the ES be updated accordingly?</p>	<p>a) The Assessment has been completed and a visual representation of the results is shown below together with the assessment summary.</p> <p>The overall conclusion from that further assessment work is that there are both increases and decreases along the routes. Where there is a perceptible change, due to transient nature of users and therefore the duration of the interaction with the Scheme, the period of any perceptible change is short and therefore the impacts are considered to be insignificant.</p> <p>A map of footpath locations overlaid on the noise contour mapping is included in Appendix A.</p> <table border="1" data-bbox="1012 835 2674 1654"> <thead> <tr> <th data-bbox="1012 835 1157 1146">Foot-path ID</th> <th data-bbox="1157 835 1484 1146">Brief description of location</th> <th data-bbox="1484 835 1908 1146">Short term noise change/impacts</th> <th data-bbox="1908 835 2214 1146">LOAEL/SOAEL comments</th> <th data-bbox="2214 835 2466 1146">Landscape features affecting perception</th> <th data-bbox="2466 835 2674 1146">Distance of perceptible difference, duration of exposure (5km/h walking speed)</th> </tr> </thead> <tbody> <tr> <td data-bbox="1012 1146 1157 1654">50</td> <td data-bbox="1157 1146 1484 1654"> Grange Farm to Hyde Road, intersects Scheme near roundabout. Scheme closes section of footpath intersecting Scheme, footpath users to use new Bridleway to roundabout to access Hyde Rd </td> <td data-bbox="1484 1146 1908 1654"> Moderate to major increase on section from Grange Farm and on bridleway. Ranges from major increase to major decrease for new route around ¾ of the roundabout </td> <td data-bbox="1908 1146 2214 1654">SOAEL exceedances at roundabout</td> <td data-bbox="2214 1146 2466 1654">New road plus landscaping features – ditches and woodland planting</td> <td data-bbox="2466 1146 2674 1654"> 370m perceptible increases. Exposure duration: 4-5 minutes 352m perceptible decreases. Exposure duration: 4-5 minutes </td> </tr> </tbody> </table>						Foot-path ID	Brief description of location	Short term noise change/impacts	LOAEL/SOAEL comments	Landscape features affecting perception	Distance of perceptible difference, duration of exposure (5km/h walking speed)	50	Grange Farm to Hyde Road, intersects Scheme near roundabout. Scheme closes section of footpath intersecting Scheme, footpath users to use new Bridleway to roundabout to access Hyde Rd	Moderate to major increase on section from Grange Farm and on bridleway. Ranges from major increase to major decrease for new route around ¾ of the roundabout	SOAEL exceedances at roundabout	New road plus landscaping features – ditches and woodland planting	370m perceptible increases. Exposure duration: 4-5 minutes 352m perceptible decreases. Exposure duration: 4-5 minutes
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Response reference:	Representation Issue	National Highways Response					
		51	<p>Edge Lane to Hyde Rd, west of Mottram Underpass.</p> <p>Scheme diverts to bridleway at Old Mill Farm Underpass</p>	<p>Major increase along most of route.</p> <p>Minor increase at Littlefields, major decrease at Hyde Road</p>	<p>Scheme makes area exceed the LOAEL. SOAEL exceedance only at road crossing</p>	<p>Woodland planting to screen new road, which is in a cutting</p> <p>Bridleway sections in their own cutting near underpass, separating users from the new road.</p> <p>New road plus landscaping features – ditches and woodland planting</p>	<p>730m perceptible increases. Exposure duration: 8-9 minutes</p> <p>81m perceptible decreases. Exposure duration: ~1 minute</p>
		52	<p>Along Hurstclough Brook, west of Mottram Underpass</p> <p>New bridleway aligned here, route realignments include Old Mill Farm Underpass</p>	<p>Major, moderate increases</p>	<p>Whole section exceeds LOAEL because of Scheme. Below SOAEL except at crossing</p>	<p>Woodland planting to screen new road, which is in cutting</p> <p>Bridleway sections in their own cutting near underpass, separating users from the new road.</p> <p>New landscape features along bridleway – water bodies, woodland, wet woodland, ditches</p>	<p>790m perceptible increases. Exposure duration: 9-10 minutes</p> <p>63m perceptible decreases. Exposure duration: ~1 minute</p>

Response reference:	Representation Issue	National Highways Response					
		87	Mottram Moor to Mottram Cemetery, south of crossroads	Negligible decrease except at junction (SW corner of crossroads). Effect at Mottram Moor similar to without Scheme	Less exposure to highest noise level at Mottram Moor No new SOAEL exceedances	Changes limited to close to junction – road layout different, woodland planting on one side that would hide the new road but not the existing A57 or junction	83m perceptible increases. Exposure duration: ~1 minute
		88	Carrhouse Lane (Mottram Moor to Robin Hood Farm and further south)	Scheme changes alignment of this footpath. Major/moderate increases along realigned section. Moderate increase south of realigned section. Minor increase to minor decrease between realigned section and Mottram Moor	Section between Mottram Moor and new road exceeds the LOAEL with Scheme (didn't before) Lower noise levels at Mottram Moor with Scheme No SOAEL exceedances except crossing the new road	Landscape changes on approach to underpass (woodland planting, gradient, road). Unlikely to affect perception.	765m perceptible increases. Exposure duration: 9-10 minutes 84m perceptible decreases. Exposure duration: ~1 minute

Response reference:	Representation Issue	National Highways Response					
		90	<p>Meadowbank Farm to Carrhouse Lane.</p> <p>Goes along Green Lane, Water Lane, The Boulevard and Woolley Close, then south west from Tara Brook Farm to Carrhouse Lane</p> <p>Scheme realigns footpath south of Tara Brook Farm where it intersects the new road</p>	<p>Green Lane – negligible/minor increases</p> <p>Water Lane - negligible/minor increases</p> <p>The Boulevard – minor decreases (approaches Woolley Lane)</p> <p>Woolley Close – moderate to major decreases (approaches Woolley Lane)</p> <p>Woolley Lane to Tara Brook Farm – major to minor decreases</p> <p>Realigned section – major increases</p> <p>South of realigned section to Carrhouse Lane– major to moderate increase</p>	<p>Below SOAEL except at road crossings for Market Street and the new road.</p> <p>Woolley Lane crossing below SOAEL with Scheme</p>	<p>No landscape changes between Meadowbank Farm and Woolley Lane.</p> <p>South of Woolley Lane, woodland planting would obscure the new road. New water bodies along new footpath route</p>	<p>383m perceptible decreases. Exposure duration: 4-5 minutes</p> <p>1220m perceptible increases. Exposure duration: 14-15 minutes</p>
		108	<p>Coach Rd (Old Hall Lane to Mottram Moor), outside DCO boundary, east of Mottram Underpass</p>	<p>Minor increase along the whole footpath except 200m about halfway along it where there are moderate increases</p>	<p>Below SOAEL, also below LOAEL</p>	<p>No changes nearby. Depends on visibility of Scheme</p>	<p>897m perceptible increases. Exposure duration: 10-11 minutes</p>
	<p><u>Baseline noise levels</u></p> <p>The Applicant [REP2-021 Q9.3] said that it will undertake noise monitoring in the area of 18 and 50 Wooley Bridge.</p> <p>b) Please could the Applicant comment on the likelihood of the baseline noise levels being lower than currently assumed in the assessment, and the potential implications of that for the significance of effect? Should the monitoring be carried out during the Examination and the ES updated accordingly?</p>	<p>b) As explained in the response to question 9.3 in the Applicant's response to the written questions (REP2–21) 18 and 50 Woolley Bridge are exposed to high levels of road traffic noise and the building facades that would be most affected are those facing the existing route of the A57, which are also exposed to the highest road traffic noise levels. Higher baseline noise levels can be expected for those two properties.</p> <p>In terms of whether baseline noise levels could be lower following monitoring:</p> <p>Noise from traffic on roads depends on both the flow of traffic and the speed of traffic. When there is less traffic on the road it tends to go faster and the overall noise level tends to be similar. Perceptible (at least 1dB) changes in noise occur with changes in traffic flow of at least 20% or a changes in traffic speed of at least 10km/hr.</p> <p>Baseline levels for operational noise are calculated based on the annual average traffic forecasts. Baseline levels for the construction noise assessment are from the baseline noise monitoring and the values from the third round (R3) strategic noise maps. The Defra R3 strategic noise maps were published in 2019 for the year 2017 so pre-pandemic. DfT Statistics show that road traffic levels were back to around pre-pandemic levels between May 2021 and Christmas 2021, they dropped again in early 2022 and are currently around 90% of</p>					

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	<p>High Peak Borough Council [REP2-053 Q7.8] raised concerns about the lack of baseline noise surveys within its area. The Applicant [REP3-018 paragraphs 8.35 and 8.36] responded at Deadline 3.</p> <p>c) Does High Peak Borough Council have any outstanding concerns regarding baseline noise surveys?</p>	<p>pre-pandemic levels (Transport use during the coronavirus (COVID-19) pandemic, Department for Transport¹). There may be less traffic which could suggest a lower baseline. Any noise survey has an element of uncertainty.</p> <p>Updating the noise survey during the examination is not recommended. As noted any noise survey has an element of uncertainty, but the two key considerations with further monitoring now would be:</p> <ul style="list-style-type: none"> • Shorter measurement periods are more uncertain. The baseline monitoring in the ES was undertaken for at least one week at each location to eliminate day-to-day variations in noise level • Measured noise levels are affected by high wind speeds and rainfall. These conditions are more prevalent in winter months. The survey for the ES was undertaken in the summer. It would most likely be necessary to exclude some of any data measured now. <p>The Applicant would submit that there is no clear reason to justify the monitoring now.</p>
	<p>Construction phase</p> <p><u>Pre-commencement</u></p> <p>Pre-commencement activities are those that are excluded from the definition of “<i>commence</i>” in Article 2 of the dDCO.</p> <p>The Applicant [REP2-021 Q9.11] said that there were unlikely to be significant effects during pre-commencement. It also appears to suggest that mitigation measures including a noise and vibration plan, Best Practicable Means and a noise and vibration complaints process during pre-commencement would not be required.</p> <p>d) Please could the local authorities comment?</p>	<p>N/A</p>
	<p><u>Construction vehicle movement</u></p> <p>The Applicant [REP2-021 Q9.5] said that noise impacts associated with movement of construction vehicles to and from the temporary welfare and storage sites (excluding the main construction compound) has not been considered individually as the locations and movements are not available.</p> <p>These movements appear to have the potential to result in significant effects, including in locations and to receptors that have not been identified.</p>	<p>The Applicant’s response is that such an assessment is not necessary. Temporary welfare and storage sites are expected to be located within the existing works areas. The noise assessment has, therefore, considered them by including construction vehicles within the assessment undertaken and reported (REP3-007). The assessment already shows the worst-case assessment by assuming that all plant operates for the duration of the works at the closest point in each work area to nearby receptors (para 11.3.16).</p> <p>Appendix 11.2 (APP-175) lists the plant and equipment used in each phase, which includes (where relevant) lorries, trucks and other vehicles which are shown with the number of them and the proportion of the assessment time which they are taken to be operating.</p> <p>The Temporary Works Plans (REP1-006) shows two structures worksites in blue which are within the works areas and have been treated in the same way.</p>

¹ <https://www.gov.uk/government/statistics/transport-use-during-the-coronavirus-covid-19-pandemic>

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	e) Please could the Applicant provide a reasonable worst-case scenario assessment?	
	<p><u>Noise sources with distinctive characteristics</u></p> <p>f) Please could the Applicant set out what consideration has been given to any construction noise sources with distinctive tonal, impulsive, or low frequency characteristics including, but not limited to, percussive piling?</p>	<p>In terms of percussive piling the Applicant can confirm that for a conservative assessment, the construction noise assessment assumed that a percussive piling method is used in all locations as shown in Appendix 11.2 of the ES (APP-175).</p> <p>In terms of other construction noise sources with distinctive tonal, impulsive, or low frequency characteristics, the construction noise assessment in the Environmental Statement (REP3-007) was undertaken using the methodology provided in the DMRB LA 111 'Noise and Vibration' Rev 2 (2020), which refers to BS 5228:2009 + A1:2014 'Code of practice for noise and vibration control on construction and open sites, Part 1: Noise'. The assessment methodology does not require any special treatment or consideration for noise sources with distinctive tonal, impulsive or low frequency characteristics.</p> <p>However, BS 5228 does provide noise source data in octave bands which are summed to provide A-weighted source noise levels at a distance of 10m. This data has been incorporated into the construction noise calculations, and therefore the assessment considers variation in the spectral characteristics of specific construction plant. Appendix 11.2 (APP-175) includes references to construction plant noise levels provided in BS 5228 for individual items of plant, from which the octave band noise sound levels can be looked-up.</p> <p>The character of construction noise would affect the selection of mitigation measures for certain items of plant or construction activities. Where possible, plant/equipment/processes would be used in a way that avoids giving rise to additional disturbance. For example, broadband reversing alarms can be used as far as possible to avoid disturbance from tonal reversing alarms. For situations where this is not avoidable, appropriate mitigation measures would be used to reduce disturbance as far as reasonably practicable as a Best Practicable Means measure secured in the REAC.</p>
	<p><u>Night works and Section 61 consent</u></p> <p>Paragraph 11.21 of ES Chapter 11 states that “<i>no night works are anticipated with the exception of traffic management</i>”? Please clarify what has been considered in the assessment. Requirement 4 of the dDCO lists potential activities outside normal working hours.</p> <p>The Applicant [REP2-021 Q9.7] said that Section 61 works would encompass all construction activities, including night time works in addition to those report in the ES.</p> <p>The ExA needs to be satisfied that the assessment considers a reasonable worst-case scenario. The REAC [REP1-037] mentions the potential for Section 61 consent.</p> <p>g) Please could the Applicant and local authorities comment on the potential for Section 61 works to result in significant</p>	<p>An application for Section 61 consent under the Control of Pollution Act 1974 will be made in relation to the scheme as a whole. The Section 61 process is aimed at agreeing and minimising the effects of the Scheme. Reference to Section 61 Consent is not just aimed at night works and securing flexibility. The Section 61 process would apply in any event and in making their application the Applicant will need to include the mitigation in the REAC. The Section 61 Consent is another level of protection in terms of ensuring what happens on the ground is consistent with the ES but importantly that the effects predicted in terms of construction activity are the same for any activity that is undertaken.</p> <p>The Section 61 consent assessment is independent of the environmental impact predicted in ES Chapter 11 Noise and Vibration (REP3-026) and commitments stated in the REAC (REP1-037). A section 61 application, however, outlines the works which are planned to take place, the working hours of the site and a plan to mitigate potential noise and vibration impact by best practical means. A section 61 application has to demonstrate to the local authority a pro-active approach to reducing environmental impact, outlining what methods are in place to minimise disruption to the neighbourhood, thus reducing the number of potential complaints.</p> <p>As part of the Section 61 application process the Principal Contractor will engage, therefore, with the relevant local authorities and agree appropriate mitigation measures and monitoring requirements to minimise impacts during construction and to ensure that construction works including night working would not give rise to any materially new or worse effects.</p> <p>As noted the Section 61 application would encompass all construction activities for the Scheme, including any night-time construction activities. Where any night-time works in addition to those reported in ES Chapter 11 Noise and Vibration (REP3-026) are identified,</p>

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	<p>effects?</p> <p>h) Please could the Applicant clarify what night works have been considered in the assessment? Should some or all Section 61 works be included in the ES to ensure that the assessment represents a reasonable worst-case scenario? How can it be ensured that Section 61 consent would not give rise to any materially new or worse effects? Should the ES be updated?</p>	<p>such as those mentioned in Question 1.34 or additional activities identified during the Detailed Design, a revised construction noise impact assessment would be undertaken to minimise impacts, and this would also be provided in support of the Section 61 application.</p>
	<p><u>Percussive piling</u></p> <p>The Applicant [REP2-021 Q9.9] said that a Supplementary Ground Report was being prepared to inform the Detailed Design but that the extent of percussive piling has not been finalised. It provided examples of the mitigation methods that could be applied and mentioned “Giken method” piling, which appears to have the potential to result in substantially lower impacts.</p> <p>The ExA would like to ensure that suitable mitigation measures are in place, particularly in relation to the potential noise and vibration effects from percussive piling.</p> <p>i) Please could the Applicant advise on the potential for percussive piling to be used more widely than the minimum necessary? Is it feasible for percussive piling to only be used where rotary bored piling cannot be?</p> <p>j) Please could the Applicant advise on the implications of percussive piling not being permitted? Does the Applicant already have enough information on ground conditions for it to identify that percussive piling is not necessary? Could “Giken method” piling be used instead?</p> <p>k) Please could the Applicant consider how the examples of mitigation methods that it has suggested could be secured?</p>	<p>i) For a conservative assessment, the construction noise assessment assumed that a percussive piling method is used in all locations as shown in Appendix 11.2 of the ES (APP-175). The construction vibration assessment considers the impacts of both methods, which are discussed in paragraphs 11.9.35 to 11.9.37 and 11.9.42 to 11.9.47.</p> <p>Supplementary Ground Investigation reporting is currently being prepared to inform the Detailed Design of the Scheme and is supporting the Contractor’s preference to use rotary bored piling as stated in the Noise chapter of the ES. The intention is that percussive piling would only be used where rotary bored piling is not feasible</p> <p>j) As noted Supplementary Ground Investigation reporting is currently being prepared to inform the Detailed Design of the Scheme. This has enabled the design to be sufficiently progressed to provide confidence that the majority of the piles can be installed using a rotary bored method. However, limited percussive piling may be required in two locations; the south west corner of the Mottram Underpass, and for construction of the foundations of the River Etherow bridge due to artesian water pressure under layers of clay. Percussive piling does need to be permitted, therefore, at this stage. The Giken method may be a possible alternative but that needs further consideration as the detailed design progresses and comparing the detailed design against the ground conditions actually encountered.</p> <p>k) Where percussive piling is required, the Contractor will use Best Practicable Means to reduce noise and vibration impacts, as stated in the REAC (REP1-037) and the Noise and Vibration Management Plan included as Annex B2 of the Environmental Management Plan (First iteration) (REP3-029). Where an alternative method to percussive piling is not feasible, noise and vibration impacts would be reduced and we have provided a list of mitigation measures.</p> <ul style="list-style-type: none"> • Pre-boring to reduce the duration of impulsive sounds and vibration • Enclosing the pile driving system in an acoustic shroud, • Preventing metal-to-metal contact during hammer strikes by introducing a non-metal dolly between the hammer and the driving helmet • Appropriate measures to minimise disturbance from 'other' sources of piling noise, such as the screeching of pulleys or guides, clanking of locking kelly bars and ringing of piles • Consideration of working hours required for piling and the acceptability of these to local residents • Reducing the energy input per hammer strike, which would decrease vibration but increase the duration of the pilings • Setting noise and vibration control targets, accompanied by monitoring for compliance <p>Where percussive piling is required, these mitigation measures would be included in the Noise and Vibration Management Plan.</p>

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[<p><u>Mitigation</u></p> <p>The Applicant [REP2-021 Q9.12] referred to mitigation measures included in the REAC [REP1-037].</p> <p>l) Please could the local authorities comment on whether enough detail been provided of the mitigation measures at this stage, to ensure that the assessed mitigation would all be delivered? Should more detail be provided of the need for the extent of monitoring to be consulted on and agreed and on any follow-up actions that might be necessary? Should more detail be set out on the complaints process and interfaces with the local authority?</p>	N/A
	<p><u>Noise insulation and temporary rehousing</u></p> <p>The Applicant [REP2-021 Q9.13] has advised that process and triggers set out in Section E.4 of BS 5228:2009 + A1:2014 'Code of practice for noise and vibration control on construction and open sites, Part 1: Noise' would be followed.</p> <p>m) Please could the Applicant update the REAC [REP1-037 reference NV1.5] accordingly? Please could the terms "may be" and "as a last resort" be replaced by more precise wording?</p>	<p>The Current wording in the REAC is as follows:</p> <p><i>"The need for temporary rehousing of residents would be determined at the detailed design stage. Where construction noise levels exceed certain threshold noise levels for a time period exceeding 10 days or more in a consecutive 15 day period or any 40 days in a consecutive 6 month period, the Applicant may be required to implement a noise insulation or temporary rehousing as last resort. The threshold noise levels that could trigger the Applicant to implement these measures are outlined in Chapter 11: Noise and Vibration".</i></p> <p>The Applicant is agreeable to update the wording as follows:</p> <p><i>"The need for temporary rehousing of residents would be determined at the detailed design stage. The contractor will offer noise insulation or ultimately temporary rehousing if situations arise, despite the implementation of BPM and other measures stated in the Noise and Vibration Management Plan, where construction noise levels exceed certain threshold noise levels (to be specified in the NVMP) for a time period exceeding 10 days or more in a consecutive 15 day period or any 40 days in a consecutive 6 month period".</i></p> <p>This will be included in a revised version of the REAC to be submitted at Deadline 5.</p>
	<p>Operational phase</p> <p><u>Modelled levels and limits of deviation</u></p> <p>n) Please could the Applicant advise whether the proposed carriageway levels have been used in the noise model?</p> <p>The Applicant [REP2-021 Q9.17] suggests that the limits of deviation may result in more significant effects being identified. This suggests</p>	<p>n) The operation phase noise model reported in the ES used the proposed carriageway levels.</p> <p>o) A high level assessment to examine potential changes in noise from Scheme movement within the limits of deviation has been undertaken. For receptors with an unscreened open view of the road, the maximum limits of deviations (+/-5m horizontally and +/-1m vertically) have potential to change noise levels by between around 1dB and 2dB when receptors are closer than 40m to the alignment. Receptors between 40m and 150m have potential to change by between around 0.5dB and 1dB. Receptors beyond 150m would change by less than around 0.5dB.</p> <p>For receptors which do not have a line of sight to the scheme, either because the Scheme is in a cutting or there are other houses/buildings obstructing the line of sight, levels would change by less than 0.5dB.</p>

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	<p>that ignoring the vertical limits of deviation may not represent a reasonable worst-case scenario.</p> <p>o) Please could the Applicant clarify the implications of vertical limits of deviation for significant effects, including for noise sensitive receptors in proximity to the Mottram Moor Link Road, such as Four Lanes, Tollemache Close and Old Hall Lane?</p>	<p>For the A57 Link Road, changes of the order described are unlikely to change the significance of the results. Given that there are receptors on both sides of the road, there would be a similar number increases and decreases in noise should the Scheme move in one direction, and most of the receptors are also affected by noise from other roads.</p> <p>For the Mottram Moor Link Road there is potential for larger noise changes for receptors who overlook the Scheme where movement within the limits of deviation change if the road is visible or not from those receptors. These receptors are shown to have significant adverse effects, and the significance is unlikely to change if the Scheme moved within the limits of deviation. Other receptors are generally screened from the Scheme, affected by noise from other roads or sufficiently far from the alignment such that movement within the limits of deviation would not change their significance.</p> <p>The high level assessment concludes that scheme movement within the limits of deviation is unlikely to give rise to many changes in significance, and is unlikely to change the overall conclusions of the noise assessment.</p>
	<p><u>Noise barriers</u></p> <p>The Applicant [REP2-021 Q9.19] has advised that absorbent noise barriers have some potential to reduce noise levels at Mottram Moor Junction and to the west of the underpass.</p> <p>p) Please could the Applicant and the local authorities comment on whether absorbent noise barriers should be secured at one or both of those locations? Should criteria be secured for when the use of absorbent noise barriers would be required?</p>	<p>The noise model has been tested to investigate the potential benefits from absorbent barriers. The high levels assessment shows, however, that absorbent noise barriers would be unlikely to change the significance of the results at any receptor.</p> <p>Receptors at Mottram Moor Junction are shown (on ES Figure 11.11 (REP1-026)) to get significant benefits due to the reductions in noise on the front of these properties. The use of absorbent barriers here may improve noise levels in the rear gardens of some properties close to the junction by less than 1dB, which would not change the significance at these receptors.</p> <p>Receptors to the west of the underpass are shown to have significant adverse effects. The use of absorbent barriers here may slightly reduce the area with major impacts at the rear facades of properties to the south of the Scheme. However, impacts on front facades are also major and these unlikely to change. Impacts at these receptors would still be regarded as significant adverse effects. There would be no changes to properties to the north of the Scheme in this area.</p> <p>Absorbent barriers have a different finish to reflective barriers, and the decision about which type of barrier to use is made by comparing changes in noise impacts against changes in landscape impacts to determine the most appropriate mitigation. Acoustically absorbent materials in absorbent barriers are on the traffic side of the barrier and are frequently wrapped in a black or metal finish, whereas reflective barriers typically have a timber or plastic finish on the traffic facing side. Reflective noise barriers at Mottram Moor Junction can be seen in Figure 7.9 viewpoint 8 – with winter in year 1 on sheet 20 (in yellow, representing a timber barrier) and winter in year 15 on sheet 21 (in silver), near the point identified “Mottram Moor (A57)”.</p>
	<p><u>Speed control measures</u></p> <p>The Applicant [REP2-021 Q9.20] said that speed control measures would be agreed and assessed following detailed design. The potential for significant effects remains unclear.</p> <p>q) Please could the Applicant provide a reasonable worst-case scenario assessment?</p>	<p>The traffic calming measures on the bypassed sections of the A57 are included within the Rochdale Envelope as no specific measures have been agreed with the Local Authorities other than a speed limit reduction to 20 mph, which is included in the traffic model and operation phase noise modelling for the Scheme. The impacts of the specific speed control measures that are agreed with the Local Authorities will be considered further once the designs are finalised.</p> <p>As stated in ES Chapter 2 (REP1-014), it is assumed that the traffic calming measures would include speed cushions and priority give way systems to slow local traffic and discourage through traffic from using this route. The reduced traffic flows and speeds were included in the traffic model and predicted to result in significant noise level decreases, as shown in ES Figure 11.11 (REP1-026). There are no assessment methods within DMRB to consider the specific noise and vibration impacts from speed cushions or other similar traffic calming measures.</p>

Response reference:	Representation Issue	National Highways Response
	<p>The ExA may ask more questions or invite more oral submissions.</p>	<p>The combination of new traffic calming measures and lower road traffic noise levels may result in a change in character of sound on the detrunked parts of the A57. With traffic using the Scheme roads, the reduction of congested traffic on the detrunked sections would reduce engine noise from idling vehicles and occurrences of brake squeal from vehicles. Occasional instances of vehicles braking may become more distinctive due to less masking from road traffic noise. Body rattle from vehicles passing over speed cushions may be perceptible and a source of transient maximum noise levels at noise sensitive receptors located close to the speed cushions. It is considered unlikely that any changes in the character of sound from these measures would change the significant benefits reported for receptors in this area.</p> <p>Additionally, the use of traffic calming measures may result in traffic using other local roads to avoid them. For example, paragraph 11.9.96 of the ES Noise and vibration chapter (REP3-026) identifies perceptible noise increases at New Road (Tintwistle) and Waterside (Hadfield) linked to the avoidance of traffic calming measures proposed at Woolley Lane.</p>
	<p><u>Post hearing note</u></p>	<p>Ms Hallam representing Sharefirst My Journey to School referred to consultation material issued by the Applicant relating to the use of electric vehicles during the construction phase. Further information on this is provided below.</p> <p>The Noise chapter of the Environmental Statement (paragraph 11.8.22, REP3-007) states that the appointed Principal Contractor would use quieter engine-powered plant when working adjacent to residential areas, and the Register of Environmental Actions and Commitments (REP1-037) includes a commitment to select vehicles, plant and equipment that generate lower levels of noise or vibration over alternatives that produce higher levels of noise or vibration as far as reasonably practicable. Electric vehicles/construction plant are a method for achieving this. Construction plant with electric engines are new to the UK market and would be used where possible to remove noise from diesel engines. Where it is not possible to source construction plant with electric engines, up to date plant using diesel engines with lower noise levels would be used.</p> <p>This has previously been confirmed in the response to ExA WQ1 Q8.13, where we say '<i>Construction plant with electric engines are new to the UK market and at the time of preparing the ES the availability was considered to be low. However, it is anticipated that by the start of works they will be more common, as supply and demand increases. The Principal Contractor is therefore pursuing the availability of this type of plant to the fullest extent possible for the Scheme. The Principal Contractor has already made enquiries around an electric powered piling rig and crane for the Mottram Underpass. The REAC (REP1-037) has commitments (NV2.4 and C2.2) to use electric and hybrid vehicles and construction plant where feasible, and EV charging points will be provided at the compound area to support this. Securing measures to use electric and hybrid vehicles and plant would need to reflect availability within the market at the time</i>'</p>

3. Item 3 - Transport Networks and Traffic, Alternatives, Access, Severance, Walkers, Cyclists, And Horse Riders

Response reference:	Representation Issue	National Highways Response
Item 3	<p>Traffic modelling</p> <p>a) To what degree are the Applicant, local highway authorities and interested parties in agreement regarding the scope and detailing of the traffic model and what are the remaining areas of dispute?</p> <p>b) What level of detailed modelling is appropriate for Manchester and Sheffield?</p> <p>c) Would more detailed modelling of Manchester and Sheffield be appropriate. If so, why and if not, why not?</p> <p>d) To what extent has the Applicant considered policies aimed at traffic restraint (including encouraging routes that avoid the National Park), reducing reliance on motor vehicles and encouraging active travel within the traffic model, and any effects of the introduction of the Greater Manchester Clear Air Zone? Are these reflected in the model?</p> <p>e) Has the Applicant considered the effects of autonomous vehicles on congestion within the traffic modelling?</p> <p>f) What further implications, if any, would a change to the use of autonomous vehicles have for air quality and noise?</p> <p>g) Would a change to autonomous vehicles have any effects on the Case for the Scheme?</p> <p>h) Do the above parties have any comment on those matters above?</p> <p>i) Can the Applicant explain which routes traffic is moving from to provide the increase in traffic volume on the A57 Snake Pass?</p>	<p>a) National Highways understands that the local highway authorities are broadly in agreement with the traffic modelling, but they have some outstanding queries on specific outputs which are under discussion. There is less agreement on the traffic modelling with some other interested parties, especially CPRE. The level of agreement on traffic modelling will be included in the relevant SoCGs. At the hearing interested parties were invited to submit written representations regarding the level of agreement on the traffic modelling by Deadline 4. The Applicant will respond to those representations at Deadline 5.</p> <p>b) The coverage of the strategic traffic model extends to both Manchester and Sheffield, but they are not included in the area of detailed traffic modelling (ADM) for the Scheme, so are modelled in less detail. This is appropriate since the Scheme is principally aimed at reducing traffic congestion and improving journey times along the A57 between Sheffield and Manchester. Consequently, the impact of the scheme on the routing of traffic within these two cities is likely to be irrelevant to the assessment of the Scheme. This is because any rerouting of traffic within these two cities due to the Scheme will be minimal and spread across the dense road network within them, meaning that the changes in traffic flows on any individual street are likely to be immaterial to the assessment of the Scheme. Also see National Highways' responses to Written Questions 3.1 and 3.2 (REP2-021).</p> <p>c) National Highways considers the level of detail of the traffic modelling covering Manchester and Sheffield to be appropriate for the assessment of the Scheme for reasons stated in b) above. Also see National Highways' responses to Written Questions 3.1 and 3.2 (REP2-021).</p> <p>d) National Highways previously considered an option to potentially restrict HGVs using routes through the Peak District National Park. This was undertaken at the option appraisal stage of the project but was rejected as undeliverable. Also see responses RR-0170-1 and RR-0620-6 in REP1-042. The Greater Manchester Clear Air Zone (GMCAZ) is not reflected in the traffic modelling for the Scheme, since it is not considered to materially affect forecast traffic flows relevant to the assessment of the Scheme. This is because the GMCAZ will only apply to commercial vehicles and its effect will most likely lead to earlier adoption of low emission vehicles rather than result in any significant diversion of non-compliant vehicles seeking to avoid entering the GMCAZ. Also see National Highways' response to Written Question 7.4 (REP2-021).</p> <p>e) The potential effects of autonomous vehicles (self-driving vehicles) on congestion have not been considered in the traffic modelling. This is because there is a high degree of uncertainty around the potential impacts of autonomous vehicles on both traffic demand and the operation of the road network, as well as the timescale for their legalisation and utilisation, which cannot currently be forecast with a reasonable degree of certainty. Whilst there are some suggestions that autonomous vehicles will increase existing road capacity in certain circumstances, due to vehicles being able to safely travel closer together, there is also the suggestion that they will make car travel more attractive and increase demand that may negate any benefits they might bring in terms of increased capacity. There are also suggestions that autonomous vehicles may smooth traffic flow reducing the amount of acceleration and deceleration of vehicles, potentially providing noise and air quality benefits. However, these benefits could only potentially be realised once nearly the whole of the vehicle fleet has converted to autonomous vehicles.</p>

Response reference:	Representation Issue	National Highways Response
		<p>f) The impact on air quality and noise due to a potential future change to autonomous vehicles cannot currently be predicted with any certainty for the reasons explained in e) above. However, legalisation and utilisation of autonomous vehicles is likely to follow the conversion of the vehicle fleet to EVs which has been accounted for in the air quality assessment.</p> <p>g) Both the traffic assessment and economic case for the Scheme have been assessed under low and high growth in demand scenarios, however, the Environmental Assessment is not required to cover these scenarios. These sensitivity tests are considered to adequately account for uncertainty in future forecasting, including the potential impacts of autonomous vehicles, and have demonstrated that the Scheme provides significant journey time benefits and good benefit to cost ratios (BCR) under both these scenarios. Also see National Highways' response to Written Question 3.7 (REP2-021).</p> <p>h) N/A</p> <p>i) The reductions in traffic congestion on the A57 delivered by the Scheme results in traffic that is currently using alternative routes across the Pennines to reroute via the A57 Snake Road/Pass to take advantage of the improved journey time relative to their current route. Because of the way the traffic model works, it is not possible to identify precisely where the increase in traffic has rerouted from compared to the Do-minimum scenario. This is because the algorithms all work with aggregate trip volumes, within which all travellers are homogenous. Nonetheless, interpreting plots from the traffic model showing the changes in traffic flow, and further link-specific analysis, indicates that the increase in traffic on the A57 Snake Road/Pass due to the Scheme is primarily because of traffic transferring from the A6/A623 route to the south (c. 50-55%), particularly for journeys between Sheffield and Manchester Airport, and from the M62 to the north (c. 20-25%). The rest of the increase (c. 20-30%) is rerouting from a variety of other alternative routes.</p>
Item 3	<p>Traffic effects outside of the Order Limit</p> <p><u>Effects within Glossop</u></p> <p>Traffic flows within Glossop are predicted to increase as a result of the Do-Something scheme when compared to those under the Do-Minimum.</p> <p>j) What consideration has the Applicant given to mitigating any effect of this increase on severance and public transport?</p> <p>k) What consideration has been given by the Applicant to any effects on current levels of traffic passing through residential streets?</p> <p>l) Do the local authorities have any comments?</p>	<p>j) The impacts of potential increases in traffic on roads within Glossop due to the Scheme have been assessed by National Highways and deemed not to give rise to any adverse effects on severance and public transport sufficient to trigger a requirement for any mitigation. Also see National Highways' response to relevant representation RR-0751-1 (REP1-042).</p> <p>k) The increases in traffic on residential roads within Glossop due to the Scheme, where modelled, have been assessed by National Highways and deemed not to give rise to any adverse effects sufficient to trigger a requirement for any mitigation.</p> <p>l) N/A</p>
Item 3	<p><u>Effects in Tintwistle, Hollingworth/Hadfield</u></p> <p>Derbyshire County Council [REP2-051 Q3.21, Q3.22 and Q14.4] raise concerns that traffic may divert off the A628 through the residential areas, or that traffic levels will increase on Woolley Lane if</p>	<p>m) The traffic modelling used to assess the impacts of the Scheme utilises a strategic reassigned model. This model dynamically reassigns traffic to alternative routes based on the comparative benefit for users of different available routes until model equilibrium is reached. The benefit to users is based on a combination of the quickest and lowest cost route (approximately 70% journey time and 30% user costs for fuel and</p>

Response reference:	Representation Issue	National Highways Response
	<p>vehicles turn left at the Gunn Inn Junction, rather than carry on to the Mottram Moor Junction.</p> <p>m) What consideration has the Applicant given to the potential effects of such movement through the residential areas or on the junction of Wooley Lane with Wooley Bridge and Hadfield Road?</p> <p>n) If necessary, how could these effects be addressed?</p> <p>o) Do the local authorities have any comments?</p>	<p>vehicle maintenance). The assignment of traffic in the traffic model therefore accurately represents the likely routing of traffic in response to changes in the road network due to the Scheme in terms of both layout and junction delay/congestion. Therefore, the traffic model accurately forecasts the changes in traffic flows due to the Scheme, including on roads in Tintwistle, Hollingworth/ Hadfield. Consequently, the scheme is not forecast to result in traffic diverting from the A628, rather than carrying on to the Mottram Moor junction, beyond that indicated by the traffic modelling. Also see National Highways' response to Written Question 3.21 (REP3-021).</p> <p>n) The impacts of the potential increases in traffic on residential areas in Tintwistle, Hollingworth/Hadfield due to the Scheme have been assessed by National Highways and deemed not to give rise to any adverse effects sufficient to trigger a requirement for any mitigation. Also see National Highways' response to Written Question 3.22 (REP3-021).</p> <p>o) N/A</p>
Item 3	<p><u>Effects within the National Park</u></p> <p>p) What consideration has the Applicant given to the effects of increases in traffic identified within the traffic modelling for the Do-Something scheme, when compared to those of the Do-Minimum scheme with reference to highway safety and severance?</p> <p>q) If necessary, how could these be addressed?</p> <p>r) Do the local authorities have any comments?</p>	<p>p) The impacts of the potential increases in traffic on roads across the Peak District National Park due to the Scheme have been assessed by National Highways and deemed not to give rise to any adverse effects on road safety or severance sufficient to trigger a requirement for any mitigation.</p> <p>Regarding severance, the Institute of Environmental Management and Assessment (IEMA) guidance suggests that a change in daily traffic flow of more than 30% is required to cause a slight severance effect and that a change of more than 60% is required for the effect to be significant, i.e. cause a moderate effect. The change in daily traffic flows on the A628 Woodhead Pass due to the scheme is forecast to be less than 10% and therefore insufficient to have a significant effect on severance. The change in daily traffic flows on the A57 Snake Pass due to the scheme is forecast to be up to 38%. However, the absolute change in traffic flow along the A57 is relatively small, representing an increase of approximately one additional vehicle per minute in each direction. Consequently, the effect of the forecast increases in traffic on the A57 Snake Pass due to the Scheme are not deemed sufficient to have a significant adverse effect on severance.</p> <p>The DMRB LA 112 methodology used in the Population and Human Health assessment in Chapter 12 of the ES (REP2-009) is separate to this, however a DMRB LA 112 compliant assessment is likely to result in a similar conclusion (i.e. it would initially have a moderate adverse effect, but this would be downgraded on the basis of absolute traffic volumes being relatively low (based on professional judgement) to minor adverse, and thus not a significant effect).</p> <p>Regarding safety, it is forecast that the Scheme could result in an increase of 41 personal injury accidents (PIAs) over 60 years on the section of the A628 between Hollingworth and the A616, which represents less than one PIA accident each year and an increase of approximately 5%. A quarter of this increase is due to a transfer of traffic flow away from the B6105 section of Woodhead Road, which shows a reduction of 9 PIAs over 60 years. Consequently, the forecast potential increase in PIAs on the A628 due to the Scheme is not deemed to have a significant effect on road safety.</p> <p>On the A57 Snake Road/Pass the increased in potential PIAs due to the Scheme is forecast to be up to 163 over 60 years, which represents an increase of less than 3 PIAs per year and an increase of approximately 14%. Although this represents a notable increase in forecast PIAs on the A57 Snake Pass, it is because of the forecast increase in traffic on the A57 due to the Scheme on a road that already has a relatively poor road safety record. The Scheme does not otherwise make the A57 inherently less safe. Furthermore, the</p>

Response reference:	Representation Issue	National Highways Response
		<p>Scheme is forecast to reduce the number of PIAs on other sections of the road network, with the overall forecast change in the number of PIAs across the affected road network due to the Scheme representing an increase of less than 0.3%, which is considered marginal. Consequently, on balance, the effect of the Scheme on road safety on the A57 Snake Pass is not considered significant.</p> <p>Also see National Highways responses to Written Question 3.19 (REP2-021), the response to relevant representations RR-0879-4 (REP1-042) and the response to National Trust's written representation point 3.1 (REP3-020).</p> <p>q) The impacts of the potential increases in traffic on roads through the Peak District National Park due to the Scheme have been assessed by National Highways and deemed not to give rise to any adverse effects sufficient to trigger a requirement for any mitigation. Nonetheless, National Highways is aware of the existing relatively high accident rate on the A57 Snake Road/Pass and that the potential increase in traffic on this route due to the Scheme may result in an increase in accidents on this road. National Highways is also aware that Derbyshire County Council (DCC) have previously investigated solutions to the high accident rate on the A57 Snake Road/Pass and continues to do so. Consequently, National Highways will collaborate with Derbyshire County Council to investigate how to best support opportunities for the implementation of road safety measures on the A57 Snake Road/Pass. This will include supporting a Designated Funds application by DCC for average speed cameras or other safety measures. This matter will be included in the SoCG with DCC. Also see National Highways' responses to Written Question 3.25 (REP2-021), to National Trust's written representation point 3.1 (REP3-020) and National Highways reply to DCC's response to Written Question 3.19 (REP3-021).</p> <p>r) N/A</p>
Item 3	<p>Connectivity within the Order area</p> <p>Tameside Metropolitan Borough Council [REP2-056 Q3.15] mention the possible provision of a link for walkers, cyclists and horse riders between the link road and Roe Road.</p> <p>s) What benefits/disbenefits would, in the view of the Applicant and the Local Highway Authorities, result from such provision, and would there be a connectivity to the bridleway provision from Old Hall Lane?</p> <p>t) Where footway linkage has not been finalised, such as at the Mottram Moor Junction, when will the Applicant determine this, and will the drawings be updated to show provision?</p> <p>u) If not determined prior to the end of the examination period, what implications would this have for the assessment of the proposed scheme?</p> <p>Tameside Metropolitan Borough Council [REP2-056 Q3.15] mention discussions regarding equestrian provision at Junction 4 of the M62, and that this is ongoing.</p> <p>v) What is the Applicant's current position?</p>	<p>s) Existing walker, cyclist and horse rider access between Junction 4 on the M67 and Roe Cross Road is provided via public right of way LON 46 and Edge Lane and this access will be retained under the Scheme proposals. In addition, following consultation with TMBC and the British Horse Society, a dedicated equestrian access will be provided across Junction 4 connecting Mottram Road with Hyde Road and the proposed footway cycleway with equestrian route off Hyde Road (Work No 7(ii)).</p> <p>Discussions have been held between the Applicant and TMBC regarding a potential connection between the proposed footway/cycleway with equestrian use (Work No 7(ii)) and LON 46 on Edge Lane, the Applicant would support a Designated Funds submission by Tameside MBC for the further investigation of this proposal.</p> <p>The additional equestrian route connection between the Scheme and Edge Lane would shorten the route between Junction 4 and Roe Cross Road and will improve connectivity with Roe Cross Road. As stated, the Applicant would be willing to support a Designated Fund application from Tameside MBC. The applicant is not aware of proposals to provide connectivity between Edge Lane and Old Hall Lane.</p> <p>t) Details of the proposed footway connectivity at the Mottram Moor Junction have been developed further and will details will be provided at Deadline 5 through the resubmission of the relevant plans and documents.</p> <p>u) The proposals are not anticipated to impact the assessment of the Scheme.</p> <p>v) Item 5.21 within the Tameside MBC Statement of Common Ground (REP2-017) provides details of the discussions held and subsequent agreement between the Applicant and Tameside MBC in relation to a</p>

Response reference:	Representation Issue	National Highways Response
		<p>request from the British Horse Society for the provision of an equestrian crossing of the M67 entry and exit lanes at Junction 4. The applicant confirms that this request has been reviewed and there is insufficient space to accommodate equestrian crossing facilities in this location without introducing significant changes to the junction. However, as stated in response to point “s)” additional equestrian crossings of the roundabout circulatory will be provided, linking the A57 Mottram Road with the proposed footway/cycleway with equestrian use on A57 Hyde Road (Work No 7(ii)) details of which will be provided at Deadline 5.</p>
Item 3	<p>Wider transport effects on public transport</p> <p>Whether, or not, public transport uses the new link roads or remains on existing roads may affect journey times and passenger usage.</p> <p>w) Has the Applicant given any consideration to differences in potential benefit between shorter and longer journeys by public transport resulting from routing?</p>	<p>w) National Highways has not considered the difference in potential benefits/dis-benefits associated with buses either remaining on their existing routes or using the new link road. The weekday frequency of bus services along the A57 Mottram Moor is typically around three buses per hour in each direction. Consequently, the number of passengers potentially impacted by any changes in journey times due to the scheme, including that associated with buses potentially using the new link road instead of using their current route, will be a fraction of the number of vehicle occupants impacted by the Scheme. Therefore, any benefits or dis-benefits associated with changes in bus journey times would not have a material impact on the assessment of the Scheme. The routing of bus services is a matter for the bus operators in conjunction with the local transport authorities and is not something National Highways can influence. Furthermore, if buses were to be rerouted along the new link road, they would most likely lose patronage since they would bypass Mottram and Hollingworth and thereby reduce access to public transport for these communities. This would probably outweigh any benefits from improved journey times for buses if they were to be rerouted along the new link road. Also see National Highways’ responses to Written Question 3.14 (REP2-021), to paragraph 19.1 in the Local Impact Report submitted by Derbyshire County Council and High Peak Borough Council (REP3-018) and National Highways reply to CPRE Peak District and South Yorkshire’s response to Written Question 3.14 (REP3-021).</p>
Item 3	<p>x) Has the Applicant given any consideration to positioning of bus stops, for example at the Wooley Bridge Junction and their effect on junction capacity and delay?</p> <p>The ExA may ask more questions or invite more oral submissions.</p>	<p>x) Discussions are ongoing with Derbyshire County Council in relation to the relocation of the existing bus stop at Woolley Bridge. Derbyshire County Council has confirmed the relocation of the bus stop is required and it will be positioned within the proposed Woolley Bridge junction. Any adverse impact on junction capacity, delay and safety for pedestrians and road users will be minimised.</p> <p>In addition, there are two existing bus stops (EH4858 and EH4859) on Mottram Moor eastbound and westbound which will be removed as a result of the construction of the proposed Mottram Moor junction. Following consultation with Tameside MBC, TfGM and the Bus Operator, agreement has been reached not to replace these bus stops as there is adequate provision either side of this location on Mottram Moor and Back Moor.</p>

4. Item 4 Landscape, Visual and Green Belt

Response reference:	Representation Issue	National Highways Response
Item 4	<p><u>National Planning Policy Framework and local policy</u></p> <p>The Applicant [REP2-021 Q5.1] has set out its consideration of the July2021 update to the National Planning Policy Statement.</p> <p>a) Are the local authorities satisfied with the Applicant's explanation?</p> <p>Tameside Metropolitan Borough Council [REP2-056 Q5.7 and Q5.15] identified documents that the Applicant should consider in its assessment. The Applicant [REP3-021 pages 54 to 57] responded at Deadline 3.</p> <p>b) Is Tameside Metropolitan Borough Council satisfied that the Applicant has identified relevant local policy?</p>	N/A
	<p><u>Baseline</u></p> <p>Tameside Metropolitan Borough Council [REP2-056 Q5.7 and Q5.15] considers that the "dense urban" description in paragraph 7.5.2 of the ES [REP2-007] is not appropriate and considers that existing landscape and townscape characteristics have not been described accurately. The Applicant [REP3-021 pages 54 to 57] responded at Deadline 3.</p> <p>c) Does Tameside Metropolitan Borough Council have any outstanding concerns about the Applicant description of the study area?</p>	N/A
	<p><u>Landscape and townscape characteristics</u></p> <p>Tameside Metropolitan Borough Council [REP2-056 Q5.15] raised concerns about the descriptions of SLLCA 3, SLTCA 5 and SLTCA 7. The Applicant [REP3-021 pages 56 to 57] responded at Deadline 3.</p> <p>d) Does Tameside Metropolitan Borough</p>	N/A

Response reference:	Representation Issue	National Highways Response
	<p>Council have any outstanding concerns about the descriptions?</p>	
	<p><u>Viewpoints</u></p> <p>Tameside Metropolitan Borough Council [REP2-056 Q5.4 and Q5.15] raised concerns about the viewpoints selected for the night-time assessment and considers that the 2km study area for visual impact omits some key theoretical viewing points. The Applicant [REP3-021 page 54] responded at Deadline 3.</p> <p>e) Does Tameside Metropolitan Borough Council have any outstanding concerns about the selection of viewpoints?</p> <p>During its second Unaccompanied Site Inspection [EV-012] the ExA noted the views of the area of the Proposed Development from the B6015 north of junction with Padfield Road adjacent to public access land.</p> <p>f) Please could the Applicant, High Peak Borough Council and Peak District National Park Authority comment on the value of views from that location? Should the Applicant provide an assessment of the visual impacts? Would it be helpful to have a night-time photomontage?</p>	<p>e) N/A</p> <p>f) Although the receptor location is sensitive, as stated within the methodology it is located well beyond 2 km from the Scheme and views would not be readily perceptible, so would therefore be discounted from the assessment. The viewpoint location mentioned by the ExA is approximately 3km from the nearest part of the Scheme boundary Viewpoints at a slightly closer distance outside of the study area, within the PDNP (VP15, 18 and 28) were assessed and predicted changes to the view were found to be 'almost non-distinguishable from view against the baseline' (see ES Appendix 7.1 (REP2-014), Table 1-2) - this is a result of the distance, topography and intervening vegetation.</p> <p>A night-time photomontage in this location can be discounted within the assessment due to the distance.</p> <p>Additionally, the methodology in ES Chapter 7 Landscape and Visual Effects (REP2-007) states "7.3.69 Viewpoints were selected to be representative of views and landscape effects along the route at intervals mostly likely effected by change to the night view. The viewpoints are considered likely to best demonstrate the night-time effects through previously unlit areas along the whole of the Scheme route.</p> <p>7.3.70 Other viewpoints have not been considered as part of the assessment as a result of being unsafe to access during hours of darkness, being in close proximity to existing lighting, or as not likely to have visual receptors after dark."</p>
	<p><u>Modelled levels and limits of deviation</u></p> <p>The Applicant [REP2-021 Q5.5] has said that changes to existing ground levels have not been taken into account.</p> <p>g) Please could the Applicant set out the anticipated vertical differences between the proposed carriageway level and existing ground level. Should the differences be explicitly considered in the assessment?</p> <p>The Applicant [REP2-021 Q5.5] has referred to a table setting out the plant and equipment considered for the assessment of the height of</p>	<p>g) To clarify to the answer for Written Question Q5.5 (a) given in REP2-021) whilst finished levels were not taken into account as the design Scheme design was at a preliminary design stage, full consideration was given to indicative cross sections, including embankments and cuttings, as shown on Engineering Drawings and Sections (REP1-005). Please refer to Cross Section Key Plan (1 of 1) and Cross Sections (1 of 3, 2 of 3 and 3 of 3) that show 15 sections at regular intervals along the Scheme. From these the anticipated preliminary design vertical difference was obtained.</p> <p>The following analysis of the route from west to east provides a description of level differences:</p> <ul style="list-style-type: none"> • Section 1: M67 Junction, minimal changes to existing levels, existing carriageway improvements. Proposed cycleway. • Section 2: The Proposed scheme generally follows the existing levels with some deviations; proposed watercourse approx. 2m below existing levels, proposed carriageway approximately 1.5m above existing levels. • Section 3: Old Mill Farm Underpass, the section runs along the carriageway, the carriageway is approximately 3-5m above the existing ground levels.

Response reference:	Representation Issue	National Highways Response
	<p>construction activity above ground level. The table does not identify the height of the plant and equipment.</p> <p>h) Please could the Applicant set out the assumptions regarding the heights of the plant and equipment and their location relative to existing ground level? How has that been considered in the assessment</p>	<ul style="list-style-type: none"> • Section 4: The Section is in cutting east of Old Mill Farm Underpass, where there are more pronounced changes to existing levels on this section, and the Scheme is in a false cutting. The proposed carriageway levels are raised approximately 6-10m above existing, and the proposed carriageway screened either side by embankments. The embankments are approximately 5m higher than the proposed carriageway level. • Section 5: West of Roe Cross Road Bridge, the proposed Scheme carriageway is approximately 5m lower than the existing levels. • Section 6: At Mottram Underpass, there are considerable changes to level along this longitudinal section due to the proposed underpass, however, generally above the underpass the existing levels at Old Hall Lane and Old Road are similar. Proposed carriageway levels will be approximately 10m below existing ground levels above. Section 7: This section shows the Scheme is in an approximately 10 -15m deep cutting to the east of Mottram Underpass. • Section 8: Approach to Mottram Moor Junction from the north, this section illustrates that the proposed scheme is generally raised above the existing ground level between by approximately 3-4m. • Section 9: A long section through Mottram Moor Junction (and as views from Viewpoint 7), The overall profile of the section at this location is similar to existing levels although between the westbound Mottram Moor link road and A6018 Back moor there will be some regrading and levels are lower by approximately 5m. • Section 10: South of Mottram Moor Junction, this section broadly follows the existing profile however there is some divergence from existing levels where new features have been incorporated. There is a change of approximately 6m to existing levels where an attenuation pond is proposed to the north east of the carriageway. The proposed carriageway has false cuttings either side which are between 1-4m high and approximately 1-4m above existing levels. • Section 11: In this location the carriageway is raised above the existing levels and bunded either side to form false cuttings, by c2-4m high bunds. The highest point of the bunds is approximately 6m from the existing ground level). The proposed carriageway is approximately 3m above the existing ground levels. • Section 12: At Carrhouse Lane Underpass, above the proposed underpass the proposed levels broadly follow the existing ground profile and only increasing above them by about 2-3m in a westerly direction towards Mottram Moor Junction. • Section 13: This section is east of Carr House Lane Underpass where the proposed Scheme carriageway is approximately 5m higher than the existing ground level. • Section 14: This Section is looking east along route approaching the River Etherow Bridge, where the proposed Scheme carriageway is approximately 4 - 5m higher than the existing ground level. • Section 15: Immediately to the west of Woolley Bridge Junction, the proposed Scheme carriageway is approximately 2-2.5m higher than the existing ground level. <p>The assessment makes no explicit reference to the existing ground level changes but as noted above they have been taken into account in the assessment. In other words, the assessment does acknowledge the presence of embankments, false cutting and landform generally. At the detailed design stage proposed levels will be refined to form a detailed model of the scheme as detailed changes to existing ground levels due to the proposed development modelled in detail at detailed design stage. The assessment was also informed through site visits together with a ZTV where the 2D proposed alignment was overlaid on existing ground level from the digital terrain model with an additional height across the whole Scheme of 4.5 metres to simulate HGV traffic visibility. Although the limits of deviation were not applied to the ZTV, these were assessed as outlined below.</p> <p>Limits of deviation are set out in the Draft DCO and for the mainline are not greater than 0.5m increase or decrease in vertical deviation. Deviation for structural elements will not be greater than 1m increase or decrease in vertical deviation. This is not considered likely to result in changes in levels of significance for landscape or visual receptors. This is set out in the National Highways response to Written Question 5.5 (REP2-021).</p>

Response reference:	Representation Issue	National Highways Response
		<p>h) Table 2.8 in chapter 2 of the ES (REP1-014) sets out the plant equipment. Whilst chapter 2 records the types of equipment proposed it does not provide explicit heights, and an assumption was made as to the height based on the type of plant proposed.</p>
	<p><u>Mitigation - planting</u></p> <p>The Applicant [REP2-021 Q5.5 and Q5.18] has said that the height and maturity of planting, screening during winter months and details of replacement trees to fill voids will be identified during detailed design.</p> <p>i) Please could the Applicant clarify what has been assumed in the assessment and how that mitigation is secured. Should the mitigation include commitments in relation to the mix of species, size, density and maintenance and in relation to the Environmental Masterplan [APP-074 Figure 2.4]?</p> <p>j) Please could the local authorities comment?</p> <p>Derbyshire County Council's Landscape Architect [REP2-046 page 42 to 43] has suggested that the proposed planting could have the effect of drawing attention to the route rather than mitigating any adverse effects.</p> <p>k) Please could the Applicant respond?</p> <p>l) Does Derbyshire County Council consider that the Environmental Masterplan [APP-074 Figure 2.4] should be updated during the Examination?</p> <p>The Applicant submitted an outline Landscape and Environmental Management Plan [REP3-022] at Deadline 3.</p> <p>m) Do the local authorities have any initial comments on the plan, including in relation to the consideration and explanation of boundary treatments, the maintenance regime, monitoring, and remedial actions during operation? Does it provide enough detail at this stage to ensure that the assessed mitigation and benefits would all</p>	<p>i) For the purposes of the assessment it was assumed that at Year 1 planting would generally range from stock size of 45-90cm high for mass understorey shrub planting, typically planted at 1.5m centres with feathered trees typically 1.8 - 2.5m high, typically planted at 3m centres, with occasional standard and heavy standard trees ranging from 3.5 - 6m in height. By Year 15 it was assumed that the smallest of the planting stock (45-90cm high) would have achieved a height of at least 7.5m and potentially more. This is partly dependent on species selection.</p> <p>Differing growth rates apply for different species. For example, Willow, Birch, Poplar, Sycamore and Alder are faster growing but less long lived and the larger climax species trees such as Oak and Beech are slower growing.</p> <p>Further commitments in relation to the mix of species, size, density and maintenance are set out in the Outline Landscape and Ecology Management Plan (LEMP) – submitted at Deadline 3 (REP3-022) . This describes in paragraph 7.1.2 the commitment to maintenance and subsequent management.</p> <p>In addition, mitigation planting will be secured through the REAC as set out in ES Chapter 7 (REP2-007), paragraph 7.8.6. Any other commitments to mitigation planting will be identified by the approving authority who will require detailed proposals covering the mix of species, sizes and density as well as maintenance.</p> <p>j) N/A</p> <p>k) The proposed planting considers a range of functions for both landscape integration and screening and seeks to achieve a careful balance between openness and protection of views for certain receptors. The roadside planting will have sections of woodland to screen and enclose as well as have more open sections, comprising grasslands scrub and hedgerows reflecting the local patterns of vegetation.</p> <p>The photomontages for the Scheme illustrate how the route will appear in the landscape on completion and at Year 15, providing a good indication of the range of visibility with both open and enclosed sections and how it will be blended into the local topography and the planting will appear as another part of the wider planting in the area.</p> <p>ES Figure 7.9v ,Winter Photomontage, Viewpoint 8, in Year 15 (APP-103) demonstrates this point, as well as showing that the existing landscape includes some linear belts of vegetation to the north of Mottram Moor A57 as the existing topography rises to the north.</p> <p>Furthermore, it should be noted that the pattern of the landscape was one of the points carefully considered in early design analysis and development, and this image below shows in simple form, how understanding of the existing patterns of the landscape, within which this Scheme should fit. The clear objective has been to use mitigation planting as a tool to integrate the Scheme into its context. This is an extract from the presentation to the Design Council Design Review in July 2020 – please refer to (AS-006).</p> <p>The aerial photograph titled Our Site (AS-006) also taken from the Design Council Design Review in July 2020, shows the route of the Scheme upon the existing landscape, illustrating its granular form, shape, colour and line within which the proposal should sit a comfortable and unobtrusive way. It can be seen that there are linear belts of tree planting to the north of the A57, most notably on Coach Road and to the south of the Scheme alignment around Carr House Lane. Certainly, the intention has not been to draw attention to the scheme by forming a corridor effect of mitigation, hence the comments above identifying a balance between enclosure and openness.</p> <p>Should the local authorities have comments on the mitigation design, in terms of planting design and arrangement, the Applicant would be willing to receive these and liaise with them on this matter.</p>

Response reference:	Representation Issue	National Highways Response
	<p>be delivered?</p> <p>n) Please could the local authorities provide written comments on the plan for Deadline 5, on Wednesday 23 February 2022?</p>	
	<p>Peak District National Park (PDNP) <u>Receptors, baseline, and assessment methodology</u></p> <p>Peak District National Park Authority [REP2-048 and REP2-055], the National Trust [REP2-080], the Campaign for National Parks [REP2-049] and CPRE Peak District and North Yorkshire [REP3-031] raised concerns about the Applicant's consideration of receptors, baseline and assessment methodology for PDNP, including for:</p> <ul style="list-style-type: none"> the great weight to be given to conserving National Parks and their highest status of protection in the National Policy Statement for National Networks (NPSNN) for and the National Planning Policy Framework the Special Qualities of the PDNP the definition of landscape receptors the perceptual issues important to landscape character the wider aspects of tranquility, in addition to noise the materiality of "slight effects" and the sensitivity of the PDNP the basis of professional judgement <p>The Applicant [REP3-028 pages 41 to 44] responded to Peak District National Park Authority at Deadline 3.</p> <p>o) Please could Peak District National Park Authority outline any outstanding concerns that it has regarding the Applicant's consideration of receptors, the baseline, and the assessment methodology for PDNP?</p> <p>p) Please could the Applicant respond?</p>	<p>p) Regarding the assessment methodology for indirect effects within the PDNPA there is agreement on all but two points. These are agreement on the methodology, and greater detail on professional judgement. On the matter of 'agreed' methodology - this will be addressed in the SoCG with PDNPA (REP2-024) and wording changed to '<i>agreed with the exception of paragraphs 7.3.45 and 7.5.9</i>'. On the matter of 'great weight to be given to National Parks, NPPF Paragraph 176 refers to developments that are within a National Park and the setting of a National Park. It has been previously noted by the Applicant in Comments on Local Impact Report submitted by Peak District National Park Authority (REP3-028) that the Scheme does not lie within the National Park, but consideration has been given to the Scheme with regards to the design location to avoid or minimise effects on both designated and undesignated areas, as demonstrated in Figure 2.4: Environmental Masterplan (APP-074). The Scheme is primarily assessed against the National Networks NPS rather than NPPF.</p> <p>On the matter of 'material consideration' i.e., that PDNPA want all levels of significance to be material considerations, this is not in alignment with DMRB LA104 Table 3.7 which is the methodology for the assessment. The assessment was undertaken within the framework of DMRB / GLVIA3 and was balanced with the assessment of direct effects. While all impacts are a material consideration appropriate weight should be attributed to an impact defined as slight adverse (which is not significant). This is set out in Comments on Local Impact Report submitted by Peak District National Park Authority (REP3-028) in response to PDNPA paragraph 8.2.21.</p> <p>On the Special Qualities of the PDNP - these have been considered in ES Appendix 7.1 Visual Schedules and also through the various tables in the Chapter 7.</p> <p>On the matter of the definition of landscape receptors, this is set out in ES Chapter 7 Landscape and visual effects (REP2-007) para. 7.6.4 and includes landscape designations, landscape character areas and the elements and features of the landscape,</p> <p>In relation to the landscape character areas of the PDNP, and as noted above, the assessment was undertaken within the framework of DMRB / GLVIA3 and was balanced with the assessment of direct effects. Please see National Highways' response to Section 8.2 of the PDNPA Local Impact Report (LIR) which relates to the issue with the baseline and definition of landscape receptors (REP3-028 in response to PDNPA paragraph 8.2.10) . It was explained that the agreed viewpoints represented an accurate example of the character at these locations and that the nuances would be highlighted. This formed the Applicant's response to para 8.2.10 in Comments on Local Impact Report submitted by Peak District National Park Authority (REP3-028).</p> <p>In addition, reference should be made to ES Figure 7.5 (APP-094) which illustrates the Landscape Character Types (LCTs) within the PDNP. It can be seen in ES Figure 7.5 that there are nine LCTs shown and that the nine indirect viewpoints capture locations in four of the LCTs. These are Open Moors, Moorland Slopes and Cloughs, Enclosed Gritstone Upland and Reservoir Valleys with Woodland. These were considered sufficient to form a basis for landscape assessment and it was concluded that there was no requirement to further break down these for landscape assessment purposes.</p> <p>On the matter of perceptual issues, tranquillity and wildness, these have been included in the baseline assessment of existing landscape character areas in the PDNP – see ES Chapter 7 Landscape and visual effects (REP2-007), Table 7.21 : Landscape Character (National and Regional Level) Value, Susceptibility and Sensitivity and in Table 7.29: Indirect Effects on Landscape Character</p>

Response reference:	Representation Issue	National Highways Response
	<p>q) Please could Peak District National Park Authority provide a written response for Deadline 4, on Wednesday 16 February 2022?</p> <p>r) Please could Natural England comment?</p>	<p>Areas within the PDNP. Where appropriate we have considered wildness as per ES Landscape and visual effects (REP2-007), Para 7.3.39 which notes specific considerations within the PDNP 'special qualities' this includes tranquillity and wildness. The change in daily traffic flows on the A628 Woodhead Pass due to the scheme is forecast to be less than 10%. The change in daily traffic flows on the A57 Snake Pass due to the scheme is forecast to be up to 38%. However, the absolute change in traffic flow along the A57 is relatively small, representing an increase of approximately one additional vehicle per minute in each direction. Consequently, the effect of the forecast increases in traffic on the A57 Snake Pass due to the Scheme are not deemed sufficient to have a significant adverse effect on landscape receptors and visual receptors including on the perception of tranquillity.</p> <p>Professional judgement was based on the assessor experience of the landscape at baseline, and the assessor considered the baseline traffic movement versus the expected change in traffic volume. The experience of the assessor standing at each viewpoint and considering the expected change in vehicle numbers was set against the observed numbers on the day of assessment. Factors taken into account were traffic number data, existing baseline and the magnitude criteria as set out in response to paragraph 8.2.15 in in Comments on Local Impact Report submitted by Peak District National Park Authority (REP3-028).</p>
	<p><u>Effects</u></p> <p>Peak District National Park Authority [REP2-048 and REP2-055], the National Trust [REP2-080], the Campaign for National Parks [REP2-049] and CPRE Peak District and North Yorkshire [REP3-031] raised concerns about the Applicant's assessment of effects for PDNP, including in relation to:</p> <ul style="list-style-type: none"> the increases in traffic on the A57 Snake Pass, whether they should be considered as a "slight increase" and whether that has led to an underestimation of indirect effects the effects on the Special Qualities of the PDNP the effects on the appreciation of dark skies from within the PDNP <p>The Applicant [REP2-021, REP3-028 pages 44 to 45] responded to Peak District National Park Authority at Deadline 3.</p> <p>s) Please could Peak District National Park Authority outline any outstanding concerns that it has regarding the Applicant's assessment of effects?</p> <p>t) Please could the Applicant respond?</p>	<p>s) N/A</p> <p>t) The methodology states in ES Chapter 7 Landscape and visual effects (REP2-007), paragraph 7.3.33, 'The assessment of indirect landscape and visual effects considers changes in two-way traffic flows through the Peak District National Park, as a result of the Scheme, and references Annual Average Daily Traffic (AADT) traffic data from the traffic model considering the 'Do minimum' (without Scheme) and 'Do Something' (with Scheme) at the Opening Year of the Scheme'.</p> <p>For the assessment of indirect effects, the individual section of the wider Affected Road Network (ARN) and its associated flows have been considered. The assessment did not consider effects associated with construction because construction is not taking place on the ARN. This is considered to represent the worst-case scenario.</p> <p>AADT traffic data covers sections of the ARN which potentially would be visible from viewpoints locations. For each route the traffic model is divided into links and, for each, the total vehicle movements per day is recorded. Reference should be made to traffic data within ES Appendix 2.1 (APP-151).</p> <p>The magnitude of impact of the 'Do Something' (with Scheme) in the opening year, on the relevant landscape character areas and visual receptors, is assessed by considering the potential effects on perceptual aspects as a result of changes in vehicle flows (including flows and impacts on peak flows); against the 'Do Minimum' (without Scheme) traffic flows at Opening Year of the Scheme.</p> <p>An analysis of changes between the 'Do Minimum' and 'Do Something' scenarios has been undertaken to inform the indirect magnitude of change on visual amenity assessment and the indirect significance of effect on visual amenity on the Peak District National Park as a result of the Scheme. This has considered the traffic model route link which is visible from the specific viewpoint.'</p> <p>The assessor considered the onsite conditions and the traffic data, in terms of the overall percentage change to the traffic numbers for the section location assessed. The AADT gives an indication of overall change to traffic numbers. The assessor took into account the baseline condition experienced on site and considered the perceptual difference that may be experienced. The assessor translated the data approximately, by applying the % change difference in traffic data and numbers to the receptor experience on site. The baseline conditions observed, considered the existing noise and movement experienced within the landscape. It was concluded that traffic along the existing routes, generally, disrupts tranquillity and the feeling of wildness and tranquillity and that the predicted increase in traffic data to the baseline would be perceived as slight when compared to the baseline experience of the assessor.</p>

Response reference:	Representation Issue	National Highways Response
	<p>u) Please could Peak District National Park Authority provide a written response for Deadline 4, on Wednesday 16 February 2022?</p>	<p>On the matter of effects on the Special Qualities of the PDNP – generally these have been considered in ES Appendix 7.1 (REP2-014) tables but more detail is set out below.</p> <p>On the matter of increased traffic in relation to 'no change' magnitude of change in the PDNP - Chapter 7 Landscape and visual effects (REP2-007), Table 7.32 defines 'no change' as not being a perceptible change from the baseline scenario. This aligns with the methodology criteria in Table 7.12 taken from the DMRB, which states that 'no change' is 'no noticeable alteration' i.e., no perceptible change. It is compliant with the methodology for highways projects.</p> <p>The change in daily traffic flows on the A57 Snake Pass due to the scheme is forecast to be up to 38%. However, the absolute change in traffic flow along the A57 is relatively small, representing an increase of approximately less than one additional vehicle per minute in each direction. Consequently, the effect of the forecast increases in traffic on the A57 Snake Pass due to the Scheme are not deemed sufficient to have a significant adverse effect on landscape receptors and visual receptors including on the perception of tranquillity. This is because the baseline is not considered to be tranquil immediately adjacent to the A57 Snake Pass (ES Chapter 7, Landscape and visual effects (REP2-007), Table 7.29 Indirect Effects on Landscape Character Areas within the PDNP). Whilst the Snake Pass (A57) is a comparatively small feature within the context of an expansive landscape, the route with its noise and movement is readily perceptible. It currently detracts from the Special Qualities of wildness and tranquillity of the landscape within the PDNP.</p> <p>ES Chapter 11: Noise and vibration (REP3-007) paragraph 11.9.97 states “<i>Traffic flows on A57 Snake Pass and A57 Snake Road would increase to give a minor noise increase in the short-term that would be perceptible. However, by the future year the increase would have a negligible impact.</i>” In relation to the perception of tranquillity, the change in traffic flow and resulting noise effects would not be considered to result in a significant effect on landscape and visual receptors given the current baseline traffic flow versus the predicted traffic flow.</p> <p>On the matter of Dark Skies - There are three areas designated by the Peak District National Park as 'dark skies sites'. However, they are all outside of the study area and due to the distance (the nearest part of the Scheme to the nearest dark skies site is approximately 28km ranging to approximately 40km) the Scheme is unlikely to be visible from any of the 'dark skies' sites'. Therefore, we have given this issue adequate consideration within the assessment.</p>
	<p>Design</p> <p><u>Key elements</u></p> <p>The Applicant [REP2-021 Q5.20 and Q6.2] has set out the principles of its approach for the design of key elements. In simplified terms the secured mitigation is for the detailed design to be consulted on with the local authorities.</p> <p>v) Please could the Applicant and the local authorities comment on the importance of the aesthetic appearance of the Proposed Development in the context of its visibility, including from residential and other receptors that currently overlook the Green Belt?</p>	<p>v) The Applicant makes reference to the ES 6.2 Non-technical summary (APP-059), (pages 11 –14) which provide an illustrative masterplan of the Scheme and assists in responding to this point.</p> <p>The aesthetic appearance of the proposed development is extremely important in the context of its visibility. The elements of the landscape design comprise principally of landform and planting which have been carefully designed to ensure that the scheme is both screened from sensitive receptors and integrated into the local landscape character with both open and enclosed sections. This will deliver a blend of screened highway and more open views. The landform enclosing the road is largely as a false cutting and this combined with the undulating nature of the wider landscape, means views of the route will be limited and also seen within the context of a wider landscape setting of rising hills and moorland slopes. The design is a combination of various influences - visibility, landscape character biodiversity and habitat creation as well as drainage considerations</p> <p>Green belt is of course not a visual or landscape designation and does not imply any particular visual or landscape quality requirement. The key to Green Belt is its openness and preventing urban sprawl.</p> <p>However, aside from this, the design approach has been to ensure that receptors, whether they are residential or any others, are not unduly affected by the Scheme. This has been achieved through a combination of embedded mitigation ES Chapter 7 Landscape and visual effects (REP2-007), paragraph 7.8.3 and essential mitigation (paragraph 7.8.4).</p>

Response reference:	Representation Issue	National Highways Response
	<p>w) Please could the local authorities comment on the secured mitigation? In principle, has enough detail been provided of the mitigation measures at this stage, to ensure that the assessed mitigation would all be delivered? Has enough consideration been given to opportunities for enhancement?</p>	<p>w) N/A</p>
	<p><u>Aspects to be adopted</u> The Applicant [REP2-021 Q5.22] said that the measures needed to secure the design of details of finishes to the scheme, street furniture and other hard landscaping would be finalised during detailed design and are secured by Article 12 of the dDCO.</p> <p>x) Are the local authorities satisfied with the Applicant's approach?</p>	<p>x) N/A</p>
	<p><u>Mitigation</u> The Applicant [REP2-021 Q5.23] has set out the process that led to the development of the current design, including the involvement of a Chartered Landscape Architect, the Design Council, National Highway's Design Panel and consultation with stakeholders.</p> <p>y) Please could the Applicant comment on the desirability of implementing the following measures to ensure that good quality sustainable design and integration of the Proposed Development into the landscape is achieved in the detailed design, construction, and operation of the Proposed Development:</p> <ul style="list-style-type: none"> • a "design champion" to advise on the quality of sustainable design and the spatial integration of the works • a "design review panel" to provide informed "critical-friend" comment on the developing 	<p>y) Whilst we stand by our response in REP2-021, we appreciate what the ExA is seeking comment on regarding further actions to achieve good quality sustainable design.</p> <ul style="list-style-type: none"> • Design champion and Design approach document – A highly experienced design team, with experience from other relevant and comparable schemes, has been involved from the start of the design process to date. An Environmental Lead has coordinated a multidisciplinary team of specialists and design champions across the project. Whilst it has not been agreed to date, a single Design Champion could be appointed to take on the responsibility of achieving sustainable design across the project in an integrated manner. This role could take on the lead author responsibility of a design approach document that would identify approaches for all engineering and environmental design. Furthermore, it would ensure that delivery and objectives identified in the design approach document during the Detailed Design and Construction stages • Design Review Panel - National Highways has agreed to a further Design Review Panel by the Design Council. This will be an opportunity to receive constructive comments on the Scheme design as it evolves into the Detailed Design stage prior to construction. • Design code – In the experience of the Applicant, design codes are not the norm for the process of design in highway projects and are more common in urban design and built form schemes such as residential developments. On this basis it is recommended that a design narrative document would be more appropriate. During the Hearing the Applicant agreed to preparing a design approach document, the contents of which will be submitted at Deadline 5 to provide details of the structure of the final document. • Timeline – As noted previously in Q5.23 (REP2-021) it is anticipated that the proposed detailed design will be formally signed off for construction in February 2023. The timeline towards that date is provided in the Applicant's response to Q5.23. With regard to consultation with stakeholders, these consultations are ongoing and the consultees are also set out in the Applicant's response to question 5.23. This is expected to continue as close collaboration will proceed with external parties, in the Detailed Design and

Response reference:	Representation Issue	National Highways Response
	<p>sustainable design proposals</p> <ul style="list-style-type: none"> an approved “design code” or” design approach document” to set out the approach to delivering the detailed design specifications to achieve good quality sustainable design an outline, including timeline, of the proposed design process, including consultation with stakeholders and a list of proposed consultees. <p>Derbyshire County Council [REP2-051 Q5.23] have said that implementation of any or all of the measures would assist in determining post-consent approvals (including the discharge of requirements) in relation to achieving good design. Tameside Metropolitan Borough Council [REP2-056 Q5.23] said that the measures would be useful.</p> <p>z) Please could High Peak Borough Council comment?</p> <p>aa) Do the local authorities consider that an outline “design code” or” design approach document” should be developed and agreed during the Examination? Please could the Applicant comment?</p> <p>bb) Please could the Applicant suggest how the measures might be secured?</p>	<p>construction phases, working closely with Tameside Metropolitan Borough Council and Derbyshire County Council, for example, to agree Scheme proposals on the single carriageway section and junctions, and also with Transport for Greater Manchester in terms of the new junction design.</p> <p>bb) The intention is that the mitigation measures would be secured through the LEMP, EMP and REAC. These would be secured through Requirement 4 of the draft DCO Schedule of Requirements.</p>
	<p>Green Belt</p> <p><u>Inappropriate development</u></p> <p>The Applicant [REP2-021 Q4.1] has set out its consideration of whether the temporary works could be considered inappropriate. With reference to Planning Policy Guidance, it has also set out its consideration of the impact of the proposal on the openness of the Green Belt.</p> <p>cc) Do the local authorities have any comments on the Applicant’s consideration of temporary works, openness, or whether</p>	<p>cc) N/A</p>

Response reference:	Representation Issue	National Highways Response
	<p>the ProposedDevelopment would constitute inappropriate development?</p> <p>The ExA may ask more questions or invite more oral submissions.</p>	

5. Item 5 – Biodiversity, Ecological and Geological Conservation

Response reference:	Representation Issue	National Highways Response
Item 5	<p>Opportunities for enhancement of biodiversity</p> <p>Derbyshire County Council [REP2-045 19.3] suggests opportunities for biodiversity/habitat enhancement that would result from the substitution of features, including gritstone for walls, bridges and buildings and the use of drystone walls or mixed species hedges rather than fencing.</p> <p>a) Would the Applicant comment on the suitability of such material and the benefits/disbenefits that would result from their use?</p>	<p>The proposals currently do not include provision for dry stone walls; however, these are being considered outside of the DCO process, along with other enhancement opportunities to be explored during the detailed design stage (subject to funding approval).</p> <p>Approximately 3.3km of hedgerow habitat will be lost due to the Scheme. However, as part of the commitment within the ES to maximise biodiversity across the Scheme, approximately 6km of new hedgerow habitat will be provided, which is a gain of approx. 2.7km. New hedgerow planting would be species-rich, comprising a range of native species (including hawthorn, blackthorn, holly, and dog rose) of local provenance adapted to a wide range of climatic conditions, maximising their resilience. Hedgerows would be largely linked to provide a network of habitats to aid connectivity (e.g. for species such as bats and birds) across the Scheme.</p> <p>The engineering solutions / details for each of the structures remain in development and are not currently available. At detailed design stage the benefits of gritstone for landscape and visual considerations, as well as biodiversity, will be considered but they can't be developed in isolation, as they take in a much wider brief embracing other key issues such as sustainability, buildability, maintenance and safety.</p>
Item 5	<p>Increases in Traffic Volume within the Peak District National Park and Habitat Regulations Assessment</p> <p>The increase in traffic volumes on the A628 (T) Woodhead Pass and A57Snake Pass are approaching 1000 vehicles Annual Average Daily Traffic (AADT).</p> <p>b) Would the Applicant provide a commentary on their approach to assessing the proposal with regard to air quality and its effects on habitat and fauna, considered against the confidence limits of the traffic modelling?</p>	<p>The increase in traffic along the A57 Snake Pass due to the Scheme is above traffic scoping criterion of 1000 AADT (change of +1150 in the 2025 opening year (value rounded to the nearest 50 vehicles)), which means that impacts of air quality on adjacent designated sites were considered further in air quality assessment. The changes in traffic due to the Scheme along the A628 Woodhead Pass to the east of New Road are not above the traffic scoping criteria AADT (change of +950 in the 2025 opening year (value rounded to the nearest 50 vehicles)), meaning that that this area was not considered further in the air quality assessment.</p> <p>ES Appendix 5.3 (APP-157) section 1.5 provides details of the approach for assessing the air quality impacts on designated ecological sites. In summary this approach was:</p> <ul style="list-style-type: none"> • Identification of designated ecological sites within 200m of roads exceeding DMRB LA 105 traffic screening criteria • Identification of habitat types from the Air Pollution Information System (APIS) database where available or through field surveys • Identification of the sensitivity to nitrogen deposition and critical loads from APIS • Air quality dispersion modelling of receptor locations representative of those designated ecological sites with nitrogen sensitive habitats • Calculation of total nitrogen deposition for receptor points with and without the Scheme and resulting change in nitrogen deposition • Screening of the change in nitrogen deposition against DMRB LA 105 designated habitat screening criteria. (The screening criteria were considered to be exceeded where total nitrogen deposition was greater than the relevant lower critical load, and the change in nitrogen deposition is greater than 1% of the relevant lower critical load.) • Where designated habitat screening criteria were exceeded the following steps were taken: <ul style="list-style-type: none"> ○ Further review of the habitat type area where screening criteria were exceeded. ○ The magnitude of change of the nitrogen deposition was considered further to identify if the change in nitrogen deposition was greater than 0.4kg N/ha/yr.

Response reference:	Representation Issue	National Highways Response
		<ul style="list-style-type: none"> ○ Where required, additional modelling was undertaken to include transect receptors to determine the distance from the road at which there would no longer be an exceedance of the designated habitat screening criteria and where the change in nitrogen deposition would no longer be greater than 0.4kg N/ha/yr. Also the number of years it would take for the nitrogen deposition to return to the 'without Scheme' deposition rate was determined. <p>ES Appendix 8.4 (APP-172) provides further details of the additional ecological assessment undertaken in accordance with DMRB LA 108 where DMRB LA 105 designated habitat screening criteria were exceeded. In summary this approach was:</p> <ul style="list-style-type: none"> • Nitrogen deposition changes were characterised against the impact and effect descriptors used in paragraph 3.10 and Table 3.11 of DMRB LA 108, and applicable Chartered Institute of Ecology and Environmental Management guidance (CIEEM, 2017, Guidelines for Preliminary Ecological Appraisal, 2nd edition) • Resource importance was determined following an approach complying with DMRB LA 108 • The integrity and key characteristics of the resource assessed taking consideration of: <ul style="list-style-type: none"> ○ The type and condition of the habitats for which the designated habitats have been designated ○ The characterisation of the nitrogen deposition impact ○ The likely biophysical responses of the designated habitats subject to a potentially significant effect, and whether these responses could undermine the ecological coherence, functioning and conservation status of the features for which the site is designated, and hence it's integrity. <p>For transect receptor points included in the air quality modelling representative of relevant statutory sites within 200 metres of the A57 Snake Pass the changes in nitrogen deposition were shown to be less than 0.4 kg N/ha/yr, with no significant effect expected.</p> <p>Natural England was content with the approach adopted for the assessment as set out in the Statement of Common Ground (REP2-028). A response to concerns raised about the confidence limits for traffic changes has previously been provided by National Highways in reply to PDNPA's response to Written Question 7.14 (REP3-021).</p>
Item 5	<p>c) It is noted that in December 2021 new Guidance on Decision-making Thresholds for Air Pollution was published by the Joint Nature Conservation Committee (JNCC), which provides an evidentiary basis for decision-making thresholds to inform the assessment of air quality impacts on designed sites. Please could the Applicant and Natural England provide any comments on the implications of the guidance for the assessment of air quality impacts as presented in the Habitat Regulations Assessment Report [REP2-004].</p>	<p>The Joint Nature Conservation Committee (JNCC) Guidance on Decision-making Thresholds for Air Pollution Technical-Report was published in December 2021. The guidance outlines decision-making thresholds to help inform assessments of the impacts of air quality on designated nature conservation sites, such as Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Sites of Special Scientific Interest (SSSIs).</p> <p>It is clear from the JNCC guidance that it has not been developed for the assessment of individual projects such as road schemes. Page 21 of the main report of the guidance states , <i>"It is not practically feasible to include a trunk road when considering the indirect effects of traffic from an individual development proposal."</i> Given trunk roads, such as the A57 and A628, are integral to National Highways assessments it is clear that the thresholds presented within JNCC's guidance were never developed for road schemes.</p> <p>The DMRB guidance and associated traffic change criteria set out in LA 105 have been specifically designed for the assessment of road schemes taking into account the outputs from strategic traffic models. The assessment carried out for the A57 Link Roads Scheme ensures that any impact on designated sites including for the production of the HRA have been reasonably and robustly assessed. National Highways therefore do not believe the release of the guidance has any implications for the assessment for this scheme.</p>
Item 5	<p>d) Why was a more cautious approach not taken with regard to biodiversity and habitat</p>	<p>The assessment followed the guidance provided in DMRB LA115 Habitat Regulations Assessment which concluded that there was no Likely Significant Effect upon any European Sites and therefore no requirement to proceed to Stage 2. The approach and conclusions were agreed between National Highways and Natural England as outlined within the Statement of Common Ground (TR010034).</p>

Response reference:	Representation Issue	National Highways Response
	effects?	
Item 5	<p>e) Visual disturbance to Special Protection Area (SPA) qualifying bird features associated with increased traffic volumes has not been specifically considered within the Habitats Regulations Assessment Screening Report [REP2-004]. Please would the Applicant provide further commentary on why this approach has been considered appropriate?</p>	<p>Whilst we accept that visual disturbance was not specifically addressed within the HRA this is due to our review of the traffic data and projected changes which are considered to be the only form of potential visual disturbance as a result of the scheme.</p> <p>If we look at the data for 'off peak' which would arguably have the greatest change in terms of visuals; with the introduction of the Scheme (known as the 'Do Something'), the average hourly increase in vehicle passes 'off peak' would be at most: 29 passes for the A57 and 27 passes for the A628 (modelled from the year 2025 to 2051). It is considered that this increase in vehicle passes is minimal, especially compared with the existing levels (known as the 'Do Minimum') of 63-90 passes for the A57 and 225-301 passes for the A628 (modelled from the year 2025 to 2051).</p> <p>Furthermore, the level of traffic currently experienced would be a 'constant' visual impact to birds within the SPA and the projected increased in vehicles would not change this.</p> <p>Therefore, it was considered that the change was 'de minimis' and therefore did not require assessment.</p>
Item 5	<p>f) In considering potential effects to the SPA qualifying bird features (i.e. ground breeding birds) from increased traffic leading to collision of vehicles and birds, the Applicant concluded in their Habitats Regulations Assessment Screening Report [REP2-004] that the potential for likely significant effects could be excluded as suitable breeding habitats would be located away from the affected road network and that species would be habituated to existing roads. Would the Peak District National Park Authority and the National Trust comment on their concerns in the light of Natural England's representation?</p>	<p>As set out in National Highways response to paragraphs 8.6.2 and 8.6.3 of the PDNP Local Impact Report (REP3-028):</p> <p>The predicted noise levels originating from the affected road network in proximity of the SPA and SSSI at the opening year have the potential to cause moderate to low behavioural changes on avifauna (such as alarm calls, heads up, change in feeding/ roosting activity), and these changes are possible with or without the Scheme. It is considered that the resident populations will be habituated to the existing noise of the operational upland roads. Operational impacts of the Scheme from increased noise are therefore considered to be not significant in relation to SPA and SSSI qualifying birds.</p> <p>Potential effects linked to traffic such as noise disturbance and the collision of vehicles with birds are considered unlikely to result in significant effects due to the Peak District upland roads being existing roads already with a high level of use. The predicted noise levels originating from the affected road network in proximity of the SPA and SSSI at the opening year have the potential to cause moderate to low behavioural changes on avifauna (such as alarm calls, heads up, change in feeding/ roosting activity), and importantly, these changes are possible with or without the Scheme. It is considered that the resident populations will be habituated to the existing noise of the operational upland roads. Operational impacts of the Scheme from increased noise are therefore considered to be not significant in relation to SPA and SSSI qualifying birds.</p> <p>Furthermore, the Site Improvement Plan for the South Pennine Moors SPA does not outline visual and noise disturbance as a potential pressure or threat.</p> <p>A detailed assessment has been provided within the Habitats Regulations Assessment Screening Report (APP-054) whereby impacts from road collisions were assessed regarding the qualifying species of the Peak District Moors (South Pennine Moors Phase 1) Special Protection Area (SPA)². Qualifying species (of which are all ground nesting birds: short-eared owl, golden plover, and merlin) mortality from vehicular collision within the SPA is not recognised as a vulnerability of the European Site³ and it is anticipated that such species will be habituated to the existing roads that are major routes through the European Sites (such as 10,700 AADT within the A628 and 3,050 AADT within the A57). Therefore, it is not considered likely to lead to significant increases in wildlife collision above the existing background level.</p>

² [European Site Conservation Objectives for Peak District Moors \(South Pennine Moors Phase I\) SPA - UK9007021 \(naturalengland.org.uk\)](https://naturalengland.org.uk/european-site-conservation-objectives-for-peak-district-moors-south-pennine-moors-phase-1-spa-uk9007021)

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Response reference:	Representation Issue	National Highways Response																																																					
		<p>'Predation', caused by both native and non-native predators, is listed as a vulnerability for the qualifying features. It has been raised by the Peak District National Park (as part of their written representation in 2021) that an increase in roadkill may lead to more predators within the Peak District Moors (South Pennine Moors Phase 1) SPA, and thus, may lead to greater levels of predation of the qualifying features of the SPA.</p> <p>The Supplementary Advice for the Peak District Moors SPA states that “[Short-eared owls] have adaptive methods to reduce this impact [predation] and in general it is considered that in suitable extensive habitat this is sufficient to maintain predation as a low risk to the population.” The report further states that “Golden plover select remote open moors which are naturally low in resident predators, these birds also use behaviour and camouflage to reduce disturbance or detection.”</p> <p>Overall, it is understood that whilst predation can negatively affect ground nesting birds, the open habitats within the Peak District, coupled with natural adaptations of the qualifying features and predator control undertaken as part of general game reserve management (such as the widespread grouse moors in close proximity to the A57 and A628), that predation upon qualifying features is not seen as a significant threat.</p> <p>In order to assess the increase in average hourly flow, modelling has been calculated for the Scheme (i.e. the 'Do Something') during daylight hours (07:00 to 19:00) which is outlined in Table 5-1 and locations of the modelling locations provided within Figure 3-1 The modelled locations during night-time hours (19:00 to 07:00) is provided within Section 3.2 within Table 3-1.</p> <p>Table 5-1 - Average hourly flows between 07:00 and 19:00 for each modelling time period.</p> <table border="1"> <thead> <tr> <th rowspan="2">Location</th> <th rowspan="2">Description</th> <th colspan="3">2025</th> <th colspan="3">2040</th> <th colspan="3">2051</th> </tr> <tr> <th>DM*</th> <th>DS**</th> <th>DS-DM</th> <th>DM</th> <th>DS</th> <th>DS-DM</th> <th>DM</th> <th>DS</th> <th>DS-DM</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>A628 west of B6105</td> <td>668</td> <td>728</td> <td>60</td> <td>691</td> <td>760</td> <td>68</td> <td>694</td> <td>775</td> <td>81</td> </tr> <tr> <td>2</td> <td>A628 east of A6024</td> <td>772</td> <td>825</td> <td>53</td> <td>862</td> <td>918</td> <td>55</td> <td>899</td> <td>951</td> <td>52</td> </tr> <tr> <td>3</td> <td>A57 Snake Pass</td> <td>191</td> <td>264</td> <td>73</td> <td>243</td> <td>332</td> <td>89</td> <td>273</td> <td>363</td> <td>90</td> </tr> </tbody> </table> <p>*Do Minimum **Do Something</p> <p>With the introduction of the Scheme (known as the 'Do Something'), the average hourly increase in vehicle passes (during daylight hours) would be at most: 90 passes for the A57 and 81 passes for the A628 (modelled from the year 2025 to 2051). It is considered that this increase in vehicle passes would not result in significant increases in roadkill above the existing high baseline levels (known as the 'Do Minimum) of 191-273 passes for the A57 and 668-899 hourly passes for the A628 (between 2025 and 2051). Therefore, it is considered unlikely that the modelled increase in vehicle passes would lead to a significant increase in roadkill which would lead to an increase in predation (indirectly through increase in roadkill) upon the qualifying features of the Peak District Moors (South Pennine Moors Phase 1) SPA.</p>	Location	Description	2025			2040			2051			DM*	DS**	DS-DM	DM	DS	DS-DM	DM	DS	DS-DM	1	A628 west of B6105	668	728	60	691	760	68	694	775	81	2	A628 east of A6024	772	825	53	862	918	55	899	951	52	3	A57 Snake Pass	191	264	73	243	332	89	273	363	90
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Response reference:	Representation Issue	National Highways Response
Item 5	g) Would Natural England comment on the strength of evidence presented to screen out any effect on ground breeding birds?	
Item 5	h) Would the Peak District National Park Authority and Natural England comment on the Applicant's responses [REP2-028] in regard to concerns raised by the Peak District National Park Authority [REP2- 048 8.6.2] on the effect on the wider range of wider range of birds for which the Dark Peak Site of Special Scientific Interest qualifies, such as Curlew, Snipe and Dunlin, together with impacts on Mountain Hare?	<p>The predicted noise levels originating from the affected road network in proximity of the SPA and SSSI at the opening year have the potential to cause moderate to low behavioural changes on avifauna (such as alarm calls, heads up, change in feeding/ roosting activity), and these changes are possible with or without the Scheme. It is considered that the resident populations will be habituated to the existing noise of the operational upland roads. Operational impacts of the Scheme from increased noise are therefore considered to be not significant in relation to SPA and SSSI qualifying birds.</p> <p>Potential effects linked to traffic such as noise disturbance and the collision of vehicles with birds are considered unlikely to result in significant effects due to the Peak District upland roads being existing roads already with a high level of use. The predicted noise levels originating from the affected road network in proximity of the SPA and SSSI at the opening year have the potential to cause moderate to low behavioural changes on avifauna (such as alarm calls, heads up, change in feeding/ roosting activity), and importantly, these changes are possible with or without the Scheme. It is considered that the resident populations will be habituated to the existing noise of the operational upland roads. Operational impacts of the Scheme from increased noise are therefore considered to be not significant in relation to SPA and SSSI qualifying birds.</p> <p>There is anecdotal evidence that Peak District mountain hares occasionally fall victim to road traffic on the high moorland roads (which includes the A57 and A628) which was highlighted by the Peak District National Park during consultations in 2021. However, roadkill is not listed as a potential threat within the Article 17⁴ (which is required under the Habitats Directive) report for mountain hare.</p> <p>There is currently no known data or research regarding the issues of roadkill relating to mountain hares and, therefore, it is difficult to ascertain the level of potential impacts of roadkill that would result from an increase in traffic within the Peak District. The roads through the Peak District are existing major routes (such as 10,700 AADT within the A628 and 3,050 AADT within the A57) and therefore, it is considered that these roads already have high levels of existing usage. Therefore, it is considered likely that species are already habituated to background noise levels and usage.</p> <p>Furthermore, mountain hare are predominantly nocturnal animals⁵ and, therefore, are most active during the night-time. Whilst the traffic flows are calculated as AADT, a significant portion of the vehicle passes would be during 'peak times' (which is between 07:00 and 19:00, or during daylight hours) with reduced traffic passes during the 'off peak' period (which is between 19:00 and 07:00, or during night-time hours). Traffic volume calculations have been formulated taking into consideration 'off peak' hours within the upland Peak District roads (the A57 and A628) which is when mountain hares are more likely to be active and subject to potential road collisions.</p> <p>With the introduction of the Scheme (known as the 'Do Something'), the average hourly increase in vehicle passes 'off peak' would be at most: 29 passes for the A57 and 27 passes for the A628 (modelled from the year 2025 to 2051). It is considered that this increase in vehicle passes is minimal, especially compared with the existing levels (known as the 'Do Minimum) of 63-90 passes for the A57 and 225-301 passes for the A628 (modelled from the year 2025 to 2051). Therefore, it is considered unlikely that the modelled increase in vehicle passes would lead to a significant increase in roadkill of mountain hares.</p>

⁴ <https://jncc.gov.uk/jncc-assets/Art17/S1334-SC-Habitats-Directive-Art17-2019.pdf>

⁵ Carlos P. E. Bedson, Lowri Thomas, Philip M. Wheeler, Neil Reid, W. Edwin Harris, Huw Lloyd, David Mallon and Richard Preziosi (2021). Estimating density of mountain hares using distance sampling: a comparison of daylight visual surveys, night-time thermal imaging and camera traps. *Wildlife Biology*, 2021(3).

Response reference:	Representation Issue	National Highways Response
Item 5	The ExA may ask more questions or invite more oral submissions.	

6. Item 6 – Climate Change

Response reference:	Representation Issue	National Highways Response
Item 6	<p>Indirect effects</p> <p>The Applicant [REP2-021 Q8.3] said that it has considered a single receptor (the atmosphere or global climate) on which the Proposed Development could have a direct impact.</p> <p>a) Please could the Applicant comment on whether consideration should be given to indirect effects on other receptors?</p> <p>b) Please could the Applicant comment on the consideration given to compliance with s5(2) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017?</p>	<p>a) The Scheme has the potential to affect the earth's climate by increasing the emission of greenhouse gases (GHGs) into the atmosphere, which will occur during construction and throughout its operational life. Due to human activities the concentration of GHGs in the atmosphere has increased dramatically, leading to global warming. This leads to myriad indirect impacts as the climate responds to the increased atmospheric temperature.</p> <p>The assessment considers the quantity of greenhouse gases (GHG) that will enter the atmosphere (the receptor). What is reported is the direct impact of likely additional and avoided GHG emissions at each lifecycle stage of the project, in comparison with current and future baseline GHG emissions.</p> <p>The effects of global warming and climate change are wide ranging, diverse and global. It is not possible to define a link between Scheme emissions and indirect climate effects on local receptors, therefore this cannot be assessed. That is, there is no recognised assessment methodology to apportion the GHG emissions from the Scheme to any of the widely recognised and global indirect impacts of climate change.</p> <p>Both direct and indirect effects are mitigated in the same way, which is either through minimising GHG emissions at source (e.g. managing and reducing embedded mitigation; implementing design measures that would benefit the transition to other the use of other transport modes) or through supporting and being aligned with relevant policy (e.g. DfT's Transport Decarbonisation Plan; National Highways Net Zero Plan). These are all discussed later in this response.</p> <p>b) An environmental statement is required to describe the likely significant effects of a proposed development on the environment (Regulation 14 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017). This includes a description of the likely significant effects on the environment from, inter alia, the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change. An environmental statement is also required to describe the likely significant cumulative impacts of the development proposed together with those from other "existing and/or approved projects" (see paragraph 5 (e) of Schedule 4 to the 2017 Regulations).</p> <p>The description of the likely significant effects on the factors specified in regulation 5(2) should cover the direct effects and any indirect, secondary, cumulative, transboundary, short term, medium-term and long-term, permanent and temporary, positive and negative effects of the development. As already stated for the global climate, the assessment has considered direct effects only. The assessment considers construction (temporary, short/medium term) and operational (permanent, long term) phases. The assessment of GHG emissions is considered to be inherently cumulative (see response to Item 6c below). Transboundary effects are scoped out of the EIA under Regulation 32 Transboundary Screening (OD-001).</p> <p>An environmental statement is only required to include such information as is reasonably required to describe the environmental effects of the development and which the applicant can reasonably be required to compile having regard to current knowledge (see R. (Khan) v London Borough of Sutton [2014] EWHC 3663 (Admin) and Preston New Road Action Group v Secretary of State for Communities and Local Government [2018] Env. L.R. 18). Accordingly, the assessment of the effect of GHGs produced for the Scheme complies with the 2017 Regulations.</p> <p>In following the DMRB LA 114 standard, the assessment reported in Chapter 14 of the ES inherently complies with the requirement in s5(2) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 to assess climate.</p>

Response reference:	Representation Issue	National Highways Response
		<p>The procedures and evaluation criteria set out in DMRB LA 114 Climate, are appropriate and sufficient to ensure that the effects (including cumulative effects) of proposed road schemes upon climate change are assessed in accordance with the 2017 Regulations and to provide sufficient evidence for the decision-making requirements set out in paragraph 5.18 of the NPS NN.</p>
Item 6	<p><u>Cumulative effects</u></p> <p>The Department for Transport's consultation letter on the A38 Derby Junctions project raises matters in relation to cumulative effects that are relevant to the Proposed Development.</p> <p>c) Please could the Applicant provide its assessment of the cumulative effects of Greenhouse Gas emissions from the Proposed Development with other existing and/or approved projects on a local, regional and national level on a consistent geographical scale (for example an assessment of the cumulative effects of the Road Investment Strategy(RIS) 1 and RIS 2 at a national level)?</p> <p>This should take account of both construction and operational effects; identify the baseline used at each local, regional and national level; and identify any relevant local, regional or national targets and budgets where they exist (including the carbon budgets, the 2050 net zero target under the Climate Change Act 2008, and the UK's Nationally Determined Contribution under the Paris Agreement). It should be accompanied by reasoning to explain the methodology adopted, any likely significant effects identified, any difficulties encountered in compiling the information, and how the assessment complies with the Environmental Impact Assessment Regulations.</p> <p>Please could the Applicant confirm that the response to all parts of this question has been prepared by a competent expert. Please provide all documents referenced, highlighting relevant paragraphs or sections,</p>	<p>The Applicant responded to the SoS consultation letter for the A38 Derby Junctions (TR010022) on 2 February 2022. In addition to the A38, the Applicant considers the responses to the Department for Transport's consultation letter for the following Schemes are also applicable to this Scheme:</p> <ul style="list-style-type: none"> - A1 in Northumberland – Morpeth to Ellingham (TR010059) - M54 To M6 Link Road Scheme (TR010054) - M25 junction 10/A3 Wisley interchange improvement (TR010030) - M25 junction 28 improvements (TR010029) <p>c) Yes, a written response that is consistent with c) can be provided. This will be submitted no later than Deadline 6 (Note: the Applicant is attempting to achieve Deadline 5).</p> <p>The Applicant considers that this response will reinforce their position that the assessment of GHG has been undertaken in an adequate and compliant way, both for the effects due to the Scheme and the assessment of cumulative effects.</p> <p>It is intended that this response will be in line with the response provided for the other DCOs. In addition, however, Scheme specific data will be included in the response which will provide the change in GHG Emissions (With Scheme Scenario – Without Scheme Scenario) using updated Government Guidance since the publication of the Environmental Statement. These are:</p> <ul style="list-style-type: none"> • Emission Factor Toolkit (version 11) (EFT v11), published by Defra in November 2021 <i>This update is notable because, for the first time, the EFT now includes data relating to the UK vehicle fleet and associated emissions for the period between 2031 and 2050 inclusive. EFT v11 also now includes a greater uptake rates of electric vehicles</i> • A sensitivity test of the Transport Decarbonisation Plan (TDP) upper and lower bounds <i>The DfT have advised National Highways that a sensitivity test based on the impact of the policy measures set out in TDP can now be undertaken for schemes. The DfT have approved a sensitivity test based on a rate of improvement that is shown in the TDP which can be applied to GHG emissions calculated for the Scheme assessment</i> <p>d) As indicated a written response will be provided by Deadline 6.</p>

Response reference:	Representation Issue	National Highways Response
	<p>and their relevance fully explained.</p> <p>d) Please could the Applicant respond in writing? When does it anticipate that a response can be provided?</p>	
Item 6	<p><u>Significant effects</u></p> <p>The Applicant [REP2-021 Q8.3] said that it has complied with DMRB LA 114 for the assessment of significant effects. This states that <i>“the assessment of projects on climate shall only report significant effects where increases in GHG emissions will have a material impact on the ability of Government to meet its carbon reduction targets”</i>. The Applicant also said that there are no recognised thresholds for assessing level of significance in EIA.</p> <p>Paragraph 5.18 of the NPSNN states that <i>“any increase in carbon emissions is not a reason to refuse development consent, unless the increase in carbon emissions resulting from the proposed scheme are so significant that it would have a material impact on the ability of Government to meet its carbon reduction targets”</i>.</p> <p>The ExA notes that the DMRB provides guidance, while the NPSNN is national policy.</p> <p>e) Please could the Applicant comment on whether the NPSNN sets the criteria for what should be considered a significant effect?</p> <p>f) Are the local authorities aware of any recognised thresholds for assessing level</p>	<p>e) NN NPS does not set out the criteria for what should be considered significant. Instead it sets out the criteria for when carbon emissions should be a reason for refusal. There are no recognised thresholds for identifying the level of significance in EIA. By following the DMRB standard and by applying professional judgement to determine significance, it is up to the Applicant to demonstrate that the Scheme will not result in ‘a material impact on the ability of Government to meet its carbon reduction targets’.</p> <p>Section 3 of DMRB LA 114, paragraphs 3.18 to 3.20 define the reporting requirements for comparison against the relevant carbon budgets and the evaluation criteria for significance, which is consistent with the decision-making requirements set out in paragraphs 5.17 and 5.18 of the NPSNN.</p> <p>ES Chapter 14 Climate (REP1-019) sets out the climate assessment completed for the Scheme. It concludes that the Scheme does not cause a significant effect for changes in GHG emissions when compared to carbon budgets.</p> <p>Furthermore, DMRB LA 114 states that: ‘Projects shall seek to minimise carbon emissions in all cases to contribute to the UK’s target for net reduction in carbon emissions’. This requirement applies whether or not the Scheme is anticipated to generate a significant effect on climate. This is what the Applicant seeks to achieve through applying the carbon reduction hierarchy.</p> <p>The Applicant will be submitting a response to Item 6(d) of the Agenda for this hearing, which will improve assessment of significance. Since the submission of the ES, Defra has released a new version of the Emission Factor Toolkit (EFT version 11, November 2021). This update is notable because, for the first time, the EFT now includes data relating to the UK vehicle fleet and associated emissions for the period between 2031 and 2050 inclusive. EFT v11 also now includes a greater uptake rate of electric vehicles.</p> <p>The previous versions of EFT⁶ that were used to calculate GHG emissions from road traffic for the Scheme, stopped considering this uptake at 2030. This resulted in overestimating the GHG emissions in future years because it did not take into account the higher uptake rates of electric vehicles post 2030.</p> <p>The DfT published their Transport Decarbonisation Plan (TDP) in July 2021, which sets out the Government’s aspirations to decarbonise transport to support the wider approach to achieving Net Zero by 2050.</p> <p>The DfT have advised National Highways that a sensitivity test based on the impact of the policy measures set out in TDP can now be undertaken for schemes. The DfT have approved a sensitivity test based on the rate of improvement shown in the TDP which can be applied to GHG emissions calculated for the Scheme assessment. The results of this test will be included in the Applicant’s response to the requests in Item 6(d) to respond in writing with respect to the SoS’s consultation letter. It will present the change in GHG emissions between the ‘with scheme scenario’ and ‘without scheme scenario’, split by carbon budgets, for the</p>

⁶ Our assessment used Defra EFT 10.1 which was the most recent version at the time of assessment

Response reference:	Representation Issue	National Highways Response
	of significance?	<p>GHG emissions previous reported in the environmental statement, the updated GHG emissions based on EFTv11 and TDP sensitivity test (upper and lower bounds).</p> <p>f) No response required; however the Applicant would like to respond to a comment from Derbyshire County Council that referred to DMRB LA 114 which states that a benchmarking exercise should be undertaken to determine the significance of project performance. DCC queried whether it should be undertaken in this scheme in comparison with others of a similar scale. This comment relates to para 3.21 in DMRB LA 114.</p> <p>The Applicant would like to refer to section 14.3.14 of ES Chapter 14 Climate (REP1-109), which provides the approach to this for our assessment. This is usually undertaken as it is not possible to obtain project-specific data for operational energy use. The published data from three other highways schemes (normalised to take account of differences in size and scale) was therefore applied so that annual emissions from operational energy use and maintenance works could be estimated.</p>
Item 6	g) The Applicant has stated [REP1-019 paragraph 14.3.20] that professional judgement has been applied in determining significant effect. Please could the Applicant clarify its methodology for the assessment of significant effects, including the basis of any professional judgements?	<p>g) In EIA terms there is no established criteria or threshold that can be used to define whether GHG emissions due to a project can be considered as significant.</p> <p>In this instance, to undertake an informed assessment, professional judgement based on information that the applicant can reasonably compile, and having regard to current knowledge, is required. This has been applied by relating the Applicant's assessment to other comparable schemes, and to consider whether the 'do something' emissions compared with the 'do minimum' emissions are of a magnitude that will not materially impact the Government's ability to meet the carbon budget, and therefore will or will not have a significant effect on climate.</p> <p>Therefore, as explained in our response to Written Question 8.3 (REP2-021), were GHG emissions for the Scheme considered to be significant, then the emissions would not be proportionate or comparable with other Schemes from RIS 2, and therefore would not be de minimis.</p> <p>Currently, no road schemes have reported GHG emissions that are so significant that they would have a material impact on the ability of the UK Government to meet its carbon reduction targets. The Scheme assessment is proportionate to the DMRB LA 114 assessments recently undertaken for other schemes within RIS 2. Furthermore, increases in GHG emissions are anticipated to be substantially outweighed by the benefits of electrifying the national fleet which is the focus of government policy in this area.</p>
Item 6	<p>Chapter 14 of the ES [REP1-019] states that the Proposed Development would release an additional 38,970 tCO₂e into the atmosphere during construction, and 401,026 tCO₂e over 60 years of operation.</p> <p>h) In the context of net zero by 2050, please could the Applicant and the local authorities comment on whether, in EIA terms, it appears reasonable for the releases to be considered "<i>not significant</i>"? Is it reasonable for the planning balance?</p>	<p>h) The assessment of significance in Chapter 14 of the ES takes into careful consideration government policy position, including that set out in the NPS NN, to ensure that any conclusions are in line with national policy and cognizant of the UK's approach to reducing GHG emissions in the sector.</p> <p>Reducing GHG emissions has been an important consideration in the development of the Scheme, and the Environmental Statement describes embedded mitigation measures which will reduce emissions.</p> <p>The Committee on Climate Change (CCC)'s 2019 report 'Net Zero: The UK's contribution to stopping global warming' reassessed the UK's long-term emissions targets and pathways for achieving these, and formed the basis of the Government's Net Zero amendment to the Climate Change Act.</p> <p>The main pathway element recommended by the CCC for transport and transport infrastructure is electrification of the national fleet. This will require a fit-for-purpose road network with adequate capacity. The CCC's 'core' and 'further ambition' scenarios</p>

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	<p>Should requirements for mitigation be on the basis that there are significant effects?</p>	<p>both include an element of modal shift to non-road transport. However, road transport remains the central focus of policy and will continue to require appropriate infrastructure.</p> <p>It is noted in the CCC report that reaching net-zero emissions will require the development or enhancement of shared infrastructure to enable many of the actions which are required. Although infrastructure development will generate some GHG emissions, it is not precluded but encouraged in the right instances by the CCC. This is supported by the NPS NN which states that generation of emissions is in itself not a reason to refuse development consent, particularly when the magnitude of these emissions is small in comparison with the reductions which will be generated by improvements such as electrification of the fleet.</p> <p>Consideration should be given to whether a scheme would materially affect the ability of the Government to meet its carbon reduction targets. The NPS NN clearly demonstrates that this is unlikely for a road improvement scheme, as all projects of this type (in total) amount to less than 0.1% of UK carbon budgets per year. DMRB LA114 also notes this stance in its guidance.</p> <p>Furthermore, the Government's Transport Decarbonisation Plan (2021) identifies that, while public transport, cycling and walking should be the first choice for those who can take it, it also states that (page 5) 'Our ambitious roads programme...will continue to reflect that in any imaginable circumstances the clear majority of longer journeys, passenger and freight, will be made by road; and that rural, remote areas will always depend more heavily on roads.'</p> <p>The Applicant would also like to refer to their response to Written Question 8.13 (REP2-021) regarding the emissions reported in the ES being conservative as the calculations do not fully account for the latest government policy on electrification of the vehicle fleet.</p> <p>It should be noted that the Applicant has taken into consideration the DMRB LA 114 requirement that '<i>Projects shall seek to minimise carbon emissions in all cases to contribute to the UK's target for net reduction in carbon emissions</i>'. This requirement applies whether or not the Scheme is anticipated to generate a significant effect on climate. By applying and fully embedding the carbon reduction hierarchy set out in LA 114: Avoid / Prevent, Reduce, Remediate, carbon reductions have been targeted and are prioritised at all stages of the development. Section 14.8 of ES Chapter 14 Climate (REP1-019) provides details of this in Tables 14.11 and 14.12, and these measures are secured by the REAC. Sections 2.5.51 to 2.5.57 of ES Chapter 2 The Scheme (REP2-005) provides further details of design measures that would benefit the transition to other the use of other transport modes. These are also outlined in our response to Item 6(o) of the Hearing Agenda below.</p>
Item 6	<p>Construction materials, transport and construction processes</p> <p><u>Construction materials</u></p> <p>Paragraph 5.19 of the NPSNN requires evidence of mitigation measures that are effective in ensuring that, "... <i>in relation to design and construction, the carbon footprint is not unnecessarily high</i>".</p> <p>The Applicant [REP2-021 Q8.6, Q.7 and Q8.11] said that the assessment is based on the use of conventional methods and materials. It said that all road schemes are invariably built to specified</p>	<p>i) A key part of design development is to implement the carbon reduction hierarchy (Build Nothing, Build Less, Build Clever, Build Efficiently) to identify additional opportunities for carbon savings. This is taking place for the detailed design development currently being undertaken and a range of specific opportunities are being considered and assessed.</p> <p>j) The Applicant will ensure that the carbon footprint for construction materials is not unnecessarily high by using current, standard best practice design and specification as a minimum, and developing new best practice where opportunities exist.</p> <ul style="list-style-type: none"> • An Outline Carbon Management Plan (CMP) will be prepared and submitted at Deadline 5. This will provide the key technical requirements of PAS 2080: <ul style="list-style-type: none"> ○ Implement a carbon management process to help an organisation meet PAS 2080 when delivering assets and/or programmes of work ○ Follow the carbon reduction hierarchy when identifying potential opportunities to reduce carbon ○ Quantify, assess and report carbon emissions to inform scheme development and overall asset management ○ Engage with other value chain members, as early as possible, in any collaborative way of working to identify whole life low carbon solutions, including the selection of relevant low carbon materials and products, innovative design solutions and construction methods

Response reference:	Representation Issue	National Highways Response
	<p>standards due to the need for safety, durability, consistency, and cost control and certainty. As such there is virtually no major variation in design and therefore carbon performance between schemes.</p> <p>The Applicant [REP2-021 Q8.11 and 8.12] then refers to opportunities for savings, including from “<i>build clever</i>”, <i>build efficiently</i>”, potential for significant reductions due to the extensive use of relevant materials, e.g. recycled sub-base, warm asphalt, lower carbon concrete through alternative ingredients, and lower carbon steel from energy efficient production. An example is provided of “<i>Cemfree concrete</i>”; which results in the cost of the concrete increasing by approximately £1-2/m³ compared to conventional materials but reduce CO₂ emissions by approximately 70% in the engineering elements where it could be applied. Reference is also made to potential savings from the use of electric or hybrid construction vehicles.</p> <p>The Applicant [REP2-021 Q8.8] suggests that the carbon footprint would be necessarily high for “<i>essential construction activity or structure, where the viability of all other engineering solutions, which would have lower carbon have been exhausted</i>”.</p> <p>i) Please could the Applicant clarify whether there are opportunities for carbon savings to the assessed scheme without compromising specified standards?</p> <p>j) Please could the Applicant comment on how it will be ensured that for construction materials “<i>the carbon footprint is not unnecessarily high</i>”? Does that require commitments to take opportunities to make savings and (exhaustive?) consideration of the viability of other engineering solutions?</p>	<p>The Outline CMP will specify how the process will be implemented to fully integrate carbon reduction into the core design process, to maximise its effectiveness and to enhance the opportunities for carbon reductions</p> <ul style="list-style-type: none"> • The wording of action C1.8 of the REAC will be reviewed for clarity. This will include a commitment to implement the CMP in accordance with the Outline CMP. This will be included in the resubmitted version of the REAC at Deadline 5
Item 6	<p><u>Mitigation measures and PAS 2080: 2016</u></p> <p>The Applicant [REP2-021 Q8.10 and Q8.11] provided an overview of PAS 2080: 2016. It</p>	<p>k) A project carbon management plan compliant with the project level requirements of PAS 2080 has been produced and implemented on the Scheme.</p>

Response reference:	Representation Issue	National Highways Response
	<p>described a comprehensive process involving the pro-active participation of all stakeholders to a strategy defined by the asset owner.</p> <p>The process would require carbon to be quantified, reduced by applying a carbon reduction hierarchy, and managed by a Carbon Management Plan.</p> <p>k) Please could the Applicant outline its strategy for the use of PAS 2080:2016? Would it involve setting targets for carbon savings and, if so, how would those targets be established? How would carbon savings be prioritised against cost and programme? How would the use of the process be independently verified? How would the outcomes of the process be reported?</p> <p>l) Please could the local authorities comment on the suitability of PAS: 2080: 2016 for mitigating carbon releases from the Proposed Development during the construction phase? Should its use be secured as necessary mitigation?</p> <p>m) Please could the Applicant comment on whether the use of PAS: 2080:2016 should be mandated for all relevant parties? How should its use be secured?</p> <p>n) Do the local authorities consider that an outline of the Applicant's strategy for the use of PAS 2080: 2016 and outline Carbon Management Plan should be developed and agreed during the Examination? What role should the local authorities have? Please could the Applicant comment?</p>	<p>The targets have been set aligned with National Highways Net Zero Plan. Please refer to the Applicant's response to Written Question 8.1(e) (REP2-021), which explains what those targets are.</p> <p>Carbon savings are not prioritised against cost and programme, rather cost, programme and carbon are three of multiple project metrics that have to be considered collectively. Each project development consideration is assessed in its own right, and against the performance of the overall scheme, and the metrics are balanced accordingly.</p> <p>PAS 2080 has three tiers of conformity covering: independent third-party certification; other-party certification; and self-validation. The current proposal is for self-validation.</p> <p>PAS 2080 is the lead technical standard for carbon reduction on infrastructure schemes, as such it is the most suitable means of minimising carbon released. This process is embedded at design stage where it is recognised that most carbon savings are achieved. A specific condition is not required to secure this as it is already implemented through contractual agreement with the principal contractor. This is also referenced in the Register of Environmental Actions and Commitments (REAC)(REP1-037) (reference C1.8) which is secured by Requirement 4 of the draft DCO. The Applicant notes the ExA's request to review the precision of wording in these commitments, and therefore the wording within the REAC will be reviewed ahead of reissuing the document at Deadline 5, as stated in j) above.</p> <p>Furthermore, the Outline CMP will provide clarity to the process that is currently underway for the Detailed Design stage. However, it should be noted that, as the PAS 2080 process is relatively new to the market, it is being piloted on the Scheme. Therefore, the ExA should appreciate that the setting and achieving targets has not yet been quantified or fully tested for similar schemes. However, the appointed Principal Designer and Contractor has an aspiration for the Scheme to be exemplar and to set a new benchmark for future projects.</p> <p>l) No response required.</p> <p>m) PAS 2080 is a demanding undertaking that is still currently only in the early stages of uptake across the infrastructure industry. Consequently, the industry does not have the maturity for mandating across all parties. However, the appointed Principal Contractor does have highly matured relationships with its supply chain and they are actively engaged in project delivery and contributing to carbon savings, as referred to in k) above.</p> <p>n) A strategy for use of PAS 2080 is already in place. It is being applied to design and development across the project team, and value chain engagement is being undertaken consistent with the requirements of PAS 2080. The Outline CMP will provide a means to consult with the local authorities to agree the development and implementation of the framework of the PAS 2080 process for the Scheme, including the reporting mechanism.</p>
Item 6	<p>Operational phase</p> <p><u>Mitigation measures</u></p> <p>Derbyshire County Council [REP2-051 Q8.14] and Tameside Metropolitan Borough Council [REP2-056 Q8.14] suggested that there were</p>	

Response reference:	Representation Issue	National Highways Response
	<p>further opportunities to mitigate carbon during construction, including:</p> <ul style="list-style-type: none"> • creating a network of cycleways and footways that would encourage active travel and reduce the reliance on vehicle use • potential for renewable energy installations and generation • opportunities for habitat creation and protection in relation to offsetting and resilience • behavioural change and cooperation between local authorities, residents and businesses to reduce carbon emissions <p>The Applicant [REP3-021 page 16] responded to Derbyshire County Council at Deadline 3.</p>	
Item 6	<p>o) Are the local authorities satisfied that appropriate carbon-reduction measures been secured for the operational phase? If not, what other measures should be secured? Could it be helpful for the Applicant to engage with a local behaviour change group during the Examination?</p> <p>The ExA may ask more questions or invite more oral submissions.</p>	N/A

Response reference:	Representation Issue	National Highways Response
Item 6		<p>Post hearing notes:</p> <p>Discussion on issue of benchmarking (with respect to Item 6(h)) and the ExA's request for the Applicant to refresh its responses on benchmarking and set out the consideration given to the DMRB and reminders of that if necessary and provide any benchmarking data or signpost where provided previously:</p> <ul style="list-style-type: none"> - Please refer to the Applicant's response to Item 6(k) for reference to the benchmarking required by DMRB. - In response to comments from CPRE that the 'do minimum' benchmark should be the net zero pathway when determining significance: a sensitivity test of the Transport Decarbonisation Plan (TDP) upper and lower bounds is to be undertaken and a written response published by Deadline 6 of the DCO examination, following a request from the Examining Authority in Item 6(d). Please refer to bullet 2 in the Applicant's response (above) to question (d) in this item. <p>Discussion with Mr Wimberley on the consideration of pricing of carbon in the application, and the increases in pricing as appropriate:</p> <ul style="list-style-type: none"> - the Written Representation from Climate Emergency Policy and Planning (CEPP) (REP2-064) also raised this as an issue and recommended that the BCR needs to be recalculated. Please refer to the Applicant's response to this Written Representation, which has been submitted at Deadline 4. <p>Outline Carbon Management Plan</p> <p>During the hearing discussion for Agenda Item 6(k) the ExA requested that the Applicant prepare and submit an Outline Carbon Management Plan (CMP) for the examination. This will be based on the emerging CMP that is being developed for the Detailed Design stage and submitted at Deadline 6.</p> <p>An indication of the structure of this document is as follows:</p> <ol style="list-style-type: none"> 1. Introduction 2. Roles and Responsibilities 3. Carbon Reduction Objectives 4. Carbon Management Principles 5. Carbon Management Process

7. Air Quality

Response reference:	Representation Issue	National Highways Response
	<p>Study area, baseline conditions and overall methodology</p> <p><u>Climate change implications for air quality</u> The Applicant [REP2-021 Q7.2] considers that adverse changes would be outweighed by a beneficial shift to electric vehicles.</p> <p>r) Are the local authorities satisfied that is a reasonable approach?</p> <p><u>Terrain</u> The Applicant [REP2-021 Q7.3] has said that adjustments for terrain have been made in accordance with DEFRA guidance. It noted that adjustments were applied when the difference between modelling and monitoring was greater than 25%.</p> <p>s) Please could the Applicant explain the basis for 25% variance being considered acceptable?</p> <p>t) Are the local authorities satisfied with the consideration of terrain, including for heavy duty vehicles travelling uphill?</p> <p><u>Modelling and methodology</u> High Peak Borough Council [REP2-053 Q7.6] raised concerns about modelling and methodology. The Applicant [REP3-021 pages 29 to 33] responded at Deadline 3.</p> <p>u) Except for Air Quality Management Areas, does High Peak Borough Council have any outstanding concerns regarding the air quality modelling and assessment methodology?</p>	<p>r) The Applicant undertook the air quality assessment using the latest available information at the time of the assessment. The Applicant acknowledges the opinion expressed by the local authorities at the hearing that there could be uncertainty in future year reductions in vehicle emissions if projections of electric vehicle uptake are not as anticipated and agrees with the view expressed that this was not a pressing concern for air quality.</p> <p>s) The response from the Applicant to Written Question 7.3 (REP2-021) covers the consideration of terrain/gradients within the air quality model set up as well as the use of model verification and adjustment as part of post processing of the model outputs. In addition the air quality model set up has reflected local factors that could affect dispersion, through the use of meteorological data from a site relevant to the Scheme. Further details of the air quality dispersion modelling set up are provided in ES Appendix 5.3 section 1.1 (APP-157).</p> <p>In relation to terrain the air quality model was initially run without the inclusion of terrain or gradient and undertook an initial verification of the air quality model against monitoring data. Following this initial verification options to improve the model set up were investigated. The inclusion of gradient within the emission calculations input to the model to account for gradient was one such improvement made to the model set up. This was applied to specific locations in model area. Where the gradient of a section of road was greater than 6% the emission calculation was amended to reflect impact of gradient on vehicle emissions for heavy and other types of vehicles. Given the large air quality study area, a pragmatic approach was taken to limit the consideration of gradient to those specific areas with the greatest gradients in the air quality study area and in light of Defra's Local Air Quality Management Technical Guidance 2016 (LAQM.TG(16)) paragraph 7.452 considering it unnecessary to consider gradients less than 10%. Following improvements to model set up the model was rerun and verification repeated. Where differences between modelled concentrations and monitored concentrations was greater than 25% model adjustment was undertaken using local verification zones.</p> <p>The air quality model verification and adjustment has been undertaken in line with the methodology given in the Department for Environment, Food and Rural Affairs (Defra) Local Air Quality Management Technical Guidance (LAQM.TG16), which references that less than a 25% variance between modelling and monitoring data is considered acceptable. Further details on the methodology for model verification and adjustment is provided in ES Chapter 5 Air Quality, paragraph 5.3.36 (REP3-006) and Appendix 5.3 section 1.3 paragraph 1.3.7 (APP-157)</p> <p>t) No response from National Highways needed</p> <p>u) National Highways will respond to any further concerns raised by local authorities in their Deadline 4 response at Deadline 5.</p>

Response reference:	Representation Issue	National Highways Response
	<p>Construction phase</p> <p><u>Quantitative assessment of construction traffic scoped out</u></p> <p>High Peak Borough Council [REP2-046 and REP2-053 Q7.8] raised concerns about screening. The Applicant [REP3-021 page 20] responded at Deadline3.</p> <p>v) Does High Peak Borough Council have any outstanding concerns regarding the screening?</p> <p><u>Pre-commencement</u></p> <p>Pre-commencement activities are those that are excluded from the definition of “commence” in Article 2 of the dDCO. The Applicant [REP2-021 Q7.10] said that there were unlikely to be significant effects during pre-commencement and that complaint response procedures and Community Engagement Plan would be prepared and implemented prior to construction.</p> <p>w) Please could the Applicant clarify whether that mitigation should apply to the pre-commencement activities?</p> <p>x) Please could the local authorities comment?</p>	<p>v) The Applicant responded at Deadline 3 (REP3-021, Page 20), but also responded to paragraph 8.35 in the High Peak Borough Council Local Impact Report (REP3-018, page 20). The Applicant will respond to any further comments from the local authorities submitted for Deadline 4 at Deadline 5.</p> <p>w) The Applicant identified pre-commencement activities in response to Written Question 1.7 (REP2-021). Pre-commencement activities include ecological surveys, archaeological investigations, soil surveys and Statutory undertaker surveys and investigations. These are routine activities associated with assessment and would not need to be covered by requirements. The applicant submitted an Outline Nuisance Management Plan at Deadline 3 (REP3-010, Annex B7) which provided mitigation for the construction works. Specific mitigation measures would not be required for pre-commencement activities.</p> <p>x) Although no response from National Highways needed, the Applicant welcomed the confirmation provided by the local authorities during the hearing that mitigation is not required for pre-commencement activities.</p>
	<p><u>Dust mitigation and monitoring</u></p> <p>The Applicant submitted an outline Nuisance Mitigation Plan [REP3-010 Annex B7] at Deadline 3.</p> <p>y) The Applicant [REP2-021 Q7.11] has noted that DMRB LA105 does not follow Institute of Air Quality Management guidance. Do the local authorities have a view on whether DMRB LA105 dust mitigation measures are appropriate or whether the</p>	<p>y) The Applicant has undertaken an assessment of the dust risk potential of the construction of the Scheme using the method set out in DMRB LA 105. This determined a “high” construction dust risk potential, which is the highest level of risk. DMRB LA105 does not provide recommended mitigation measures. The Application has therefore determined suitable mitigation measures for a “high” construction dust risk potential from Institute of Air Quality Management (IAQM) Guidance on the assessment of dust from demolition and construction (2014). These mitigation measures have been included in the Outline Nuisance Management Plan submitted by the Applicant at Deadline 3 (REP3-010, Annex B7).</p> <p>The Applicant will respond at Deadline 5 to any further written submissions from the local authorities made at Deadline 4.</p> <p>z) No response needed from National Highways</p>

Response reference:	Representation Issue	National Highways Response
	<p>mitigation should be in accordance with Institute of Air Quality Management guidance? Should any other recognised guidance be included in the plan?</p> <p>z) Do the local authorities have any general comments on provisions for dust mitigation and monitoring in the plan? Does it provide enough detail at this stage?</p> <p>aa) Please could the local authorities provide written comments on the plan for Deadline 5, on Wednesday 23 February 2022?</p>	<p>aa) No response needed from National Highways</p>
	<p><u>Monitoring</u></p> <p>High Peak Borough Council [REP2-046 and REP2-053 Q7.12] raised concerns about monitoring at high-risk sites. The Applicant [REP3-021 pages 19 and 20] responded at Deadline 3.</p> <p>bb) Does High Peak Borough Council have any outstanding concerns regarding monitoring during construction?</p>	<p>bb) no response needed from National Highways</p>
	<p>Operational phase</p> <p><u>Assessment for the design year of 2040</u></p> <p>The Applicant [REP2-021 Q7.13] said that the opening year of 2025 is expected to be the worst case rather than 2040, because increases in traffic between 2025 and 2040 would be more than offset by a shift to electric vehicles.</p>	<p>cc) The opening year of 2025 is expected to be a worst case for air quality given reductions in vehicle emissions and background concentrations due to the shift to electric vehicles with the Government's commitment to end the sale of new petrol and diesel cars and vans from 2030, and the plan to end sales of new diesel HGVs from 2040. The Applicant has provided a response (REP2-021) focused on nitrogen dioxide. In relation to particulate matter tail pipe emissions would reduce due to the shift to electric vehicles, but it is acknowledged that brake and tyre wear is also a source of particulate matter.</p> <p>As set out in a response to the Peak District National Park Authority local impact report, paragraph 8.3 (REP3-028). Electric vehicles do not produce any tailpipe emissions of PM₁₀ hence although there may be a projected increase in traffic by 2040, it does not follow that emissions would increase, as a result of the increased proportion of low and zero emission vehicles in the fleet. This is demonstrated in the Department for Transport (DfT)'s published Road Traffic Forecasts 2018⁷, which show that despite a projected growth in traffic of 51% between 2015 and 2050, there is a decline in tailpipe PM₁₀ emissions of 98% by 2050 when considering scenario 7, the shift to Zero Emission Vehicles (see Table 3 and paragraph 4.51 of DfT Road Traffic Forecasts 2018). Projected reductions in emissions would</p>

⁷ Department for Transport, 2018. Road Traffic Forecasts 2018, available at: Road Traffic Forecasts 2018 (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/873929/road-traffic-forecasts-2018-document.pdf)

Response reference:	Representation Issue	National Highways Response
	<p>cc) Are the local authorities satisfied that is a reasonable approach?</p>	<p>in fact be even lower than those forecast by the DfT in their scenario 7, which used a date of 2040 for an end to sales of new petrol and diesel cars and vans, rather than the current commitment of 2030. Brake and tyre wear would be expected to remain static, but overall, the opening year of 2025 would still be expected to be the worst case for PM₁₀.</p>
	<p>Air Quality Management Areas (AQMAs)</p> <p><u>Tintwistle AQMA</u></p> <p>The Applicant [REP2-021 Q7.15] explained that no receptors have been assessed in the Tintwistle AQMA as they were screened out in accordance with DMRB LA 105. Changes in traffic of 960 AADT being below the threshold of 1,000 AADT.</p> <p>dd) Please could the Applicant set out the level of confidence in 960 AADT and the potential for changes in traffic to exceed the threshold?</p> <p>ee) Please could the Applicant comment on how the screening is consistent with the potential for a very small increase in NO₂ to result in non-compliance with the Air Quality Directive / Air Quality Standards Regulations 2010?</p> <p>ff) Noting the predicted increase in traffic levels, how does the Applicant advise the ExA to consider compliance with the Air Quality Directive / Air Quality Standards Regulations 2010? Should representative receptors be identified in the Tintwistle AQMA and the assessment updated accordingly?</p> <p>gg) Do High Peak District Council or Peak District National Park Authority have any comments?</p>	<p>dd) - A response to concerns raised by PDNPA about the confidence limits for traffic changes has previously been provided by National Highways in Applicants comments on Written Questions Responses (REP3-021), response Written Question 7.14. The traffic forecasting, traffic modelling and the assessment of the Scheme has been undertaken in full accordance with the Department of Transport's (DfT) Transport Analysis Guidance (TAG), utilising the most up to date modelling tools available at the time of the assessment.</p> <p>The DMRB LA 105 guidance (para 2.1) provides traffic change criteria as absolute values. The guidance does not provide tolerance levels around the absolute values. As stated in DMRB LA 105 paragraph 2.1 note 2 the AADT Threshold of 1000 AADT and 200 heavy duty vehicles (HDV) represent the lowest possible thresholds set to ensure the traffic model can accurately represent traffic conditions with an appropriate level of confidence.</p> <p>Other traffic screening thresholds exist such as those within Institute of Air Quality Management (IAQM) Land-Use Planning and Development Control: Planning for Air Quality (2017) guidance. The thresholds are lower than those in DMRB LA 105, however the IAQM guidance (paragraph 1.4 and 1.5) state that the thresholds are specifically intended for residential and mixed used developments and that highways schemes have their own set of criteria and thresholds to be used.</p> <p>ee) The air quality assessment presented in ES Chapter 5 Air quality (REP3-006) presents two sets of future year annual mean NO₂ concentrations.</p> <p>The air quality modelling results are presented using the Defra LAQM.TG(16) technical guidance method and also using national highways alternative Long Term Annual Projection Factors (LTTE6). DMRB LA 105 paragraphs 2.47 to 2.55 present a methodology for addressing uncertainty in predicted future roadside nitrogen dioxide (NO₂) concentrations which uses the LTTE6 factors. Once air quality modelling has been completed and adjustments made following model verification a further adjustment may be made using the LTTE6 factors via gap analysis to ensure that the modelled annual mean NO₂ concentrations are not too optimistic when making the judgement of the significance of the effects of the Scheme on air quality. A decision whether it was appropriate to use the LTTE6 projection factors was made based on analysis of trends in local monitoring data. This analysis is presented in Appendix 5.3 section 1.4 (APP-157). Analysis of local monitoring data indicated that the trend was most similar to Defra LAQM.TG(16) projections and less conservative than the LTTE6 factors. However, the DMRB LA 105 LTTE6 projection factors have been selected for use in the air quality assessment to ensure that the assessment is not overly optimistic. As such the LTTE projection factors have been used to derive the concentration at receptors (human health and ecological) for making the judgement of the significance of the Scheme.</p> <p>Note that DMRB LA 105 paragraph 2.54 states that "<i>the compliance risk assessment shall use the results from the Defra methodology (i.e. Defra LAQM.TG(16) method) so the assessment is consistent with Defra's reporting on compliance with EU limit values.</i>" As such the compliance risk assessment has used the Defra LAQM.TG(16) projection factors for calculating NO₂ concentrations for determining the risk of non-compliance with the Air Quality Directive.</p> <p>In summary:</p>

Response reference:	Representation Issue	National Highways Response
		<ul style="list-style-type: none"> • The compliance risk assessment is based on the Defra LAQM.TG(16) methodology for predicting future year annual mean NO₂ concentrations. This uses projections which are more optimistic. As such you effectively get lower concentrations. • Long term trends calculation (LTTE6) method is used for assessing overall significance of the Scheme. This uses projections which are less optimistic. As such you get higher concentrations than those predicted in the compliance risk assessment. <p>Both sets of future year annual mean NO₂ concentrations are calculated for locations adjacent to roads screened in against the DMRB LA 105 traffic change criteria.</p> <p>DMRB LA 105 paragraph 2.22 states that “<i>the compliance risk assessment shall only be undertaken on roads identified in the Pollution Climate Mapping (PCM) model which are within the affected road network (ARN) for the air quality assessment</i>”. The Defra PCM model is a national level model which includes major urban roads. The A628 is only included in the Defra PCM model to the west of Chapel Brow.</p> <p>The PCM model does not include the full section of the A628 within the Tintwistle AQMA. The A628 east of New Road is not with the ARN and as such has not been considered further in the compliance risk assessment as there is no overlap between the PCM model road link and the ARN for the Scheme.</p> <p>Where there is an overlap between the ARN and the PCM model just to the west of New Road the compliance risk assessment modelling results (e.g. receptors QF917 and QF920, which re the closest included in the modelling to Tintwistle) indicate that while there is a worsening with the Scheme, under the Defra LAQM.TG(16) method there would not be an exceedance of an AQS objective/Limit Value and as such there would not be a non-compliance with the Air Quality Directive. This is for a location within the ARN where the traffic DMRB LA 105 traffic change criteria are exceeded, so by extension for Tintwistle which is not within the ARN there would also not be a non-compliance with the Air Quality Directive</p> <p>ff) The Applicant refers back to the response for item ee) gg) No response needed from National Highways</p>
	<p><u>Dinting Vale / Glossop AQMA</u></p> <p>A single receptor has been considered in the Dinting Vale / Glossop AQMA, and assessed as having a worsening in air quality due to the Proposed Development.</p> <p>hh) Please could the Applicant set out whether the worsening in air quality indicates that the Proposed Development would affect the ability of a non-compliant area to achieve compliance within the most recently reported timescales?</p>	<p>A single receptor (R319 at the junction of the A57 and A626 Glossop Road) in the Glossop AQMA has been considered when determining the overall significance of the project for human health, as this receptor exceeded the Government Air Quality Strategy (AQS) objective for annual mean nitrogen dioxide (NO₂) in the Scheme opening year using the LTTE6 projection factors. However, the air quality modelling for human health has included additional receptors within the Glossop AQMA where they are within 200 m of the affected road network. These receptors are shown in Figure 5.2ii sheet 15 (APP-078). The Glossop AQMA boundary is shown in Figure 5.1 sheet 7 (APP-076). With regards to compliance with the Air Quality Directive, three receptors within the Glossop AQMA have been included in the compliance risk assessment (PA179, QF601 and QF602). These receptors are shown in Figure 5.4 sheet 8 (APP-080) and modelling results presented in Appendix 5.5 section 1.3 (APP-159).</p>

Response reference:	Representation Issue	National Highways Response
	<p>The Applicant [REP2-021 Q7.18] appears to suggest that no receptors in the Dinting Vale / Glossop AQMA are expected to exceed the limit value.</p> <p>ii) Please could the Applicant clarify whether that is on the basis of DEFRA or DMRB LA 105 methodology? With reference to paragraph 5.7.26 of the ES and paragraph 2.75.1 of DMRB LA 105, should the assessment be in accordance with DMRB LA 105 methodology?</p> <p>The single receptor is within 25m of a junction, which means that it cannot be considered as a qualifying feature for compliance with the Air Quality Directive / Air Quality Standards Regulations 2010.</p> <p>jj) Noting the predicted increases in traffic levels and that a qualifying feature has not been assessed, how does the Applicant advise the ExA to consider compliance with the Air Quality Directive / Air Quality Standards Regulations 2010? Should representative receptors be identified in the Dinting Vale / Glossop AQMA and the assessment updated accordingly?</p> <p>kk) Do High Peak District Council or Peak District National Park Authority have any comments?</p> <p>The ExA may ask more questions or invite more oral submissions.</p>	<p>hh) The compliance risk assessment uses the Defra LAQM.TG (16) future year projection factors (these are less conservative than the DMRB LA 105 LTTE6 projection factors). While there is a worsening with the Scheme at receptors included in the compliance risk assessment with the Glossop AQMA, under the Defra LAQM.TG(16) method there would not be an exceedance of an AQS objective/Limit Value and as such there would not be a non-compliance with the Air Quality Directive.</p> <p>ii) The compliance risk assessment uses the Defra LAQM.TG (16) future year projection factors (these are less conservative than the DMRB LA 105 LTTE6 projection factors). This is to ensure that results are comparable to Defra reporting on compliance. DMRB LA 105 paragraph 2.54 states that “the compliance risk assessment shall use the results from the Defra methodology (i.e. Defra future year projection factors) so the assessment is consistent with Defra’s reporting on compliance with EU limit values.”</p> <p>Where “project air quality model” is referred to in paragraph 5.7.26 of the ES this is referring to the modelling results from the Scheme air quality model. Paragraph 2.75.1 of DMRB LA 105 is referring to undertaking a comparison of the difference in concentrations within the Defra Pollution Climate Mapping (PCM) model and those from the Scheme modelling results with the Defra projection assumptions (similar to the verification process undertaken for the Scheme base model). Where differences are >10% then investigation of the potential reasons is undertaken. For the Scheme the difference was >10% as presented in Appendix 5.5 section 1.3. Table A-5 (APP-159) The Scheme air quality model predicted higher concentrations than the PCM model. Investigation of differences was undertaken and was found to be primarily due to traffic input data. The Scheme uses a scheme specific traffic model which has been validated with local traffic count and journey time data. The PCM model is a national level model and includes major road links. As the Scheme air quality model predicted higher concentrations than the PCM model, they were considered more conservative and therefore used in the compliance risk assessment.</p> <p>jj) While Defra’s interpretation of the Air Quality Directive is that locations within 25m of a junction are not considered to be qualifying features for assessing compliance, residential locations have been included in the compliance risk assessment for the Scheme on a precautionary basis. Figure 5.4 Sheet 8 (APP-080) presents receptors included in the compliance risk assessment at Dinting Vale, this shows that locations representative of residential properties within 25m of the A57 / A626 Glossop Road junction have been included on a precautionary basis.</p> <p>kk) no response needed from National Highways</p>
		<p>Post hearing note</p> <p>Discussion of health issues: The Applicant notes the points raised by Mr Wimberley and CPRE and awaits their written submissions at Deadline 4. It should be noted that the air quality assessment (Chapter 5 of the ES, REP3-006) concludes that there are not expected to be any significant adverse effects with the Scheme for human health receptors, or risk compliance with the Air Quality Directive. Overall, there is no significant adverse effect on human health due to the Scheme, the overall impact of the Scheme is expected to be an improvement. Chapter 12 Population and human health of the ES (REP2-009) concludes that, for health, a Positive health outcome is</p>

Response reference:	Representation Issue	National Highways Response
		anticipated. Please also refer to the Applicant's response to Written Question 13.7 (REP2-021) which explains that DMRB LA 112 does not require the identification of links between individual health concerns and the Scheme, rather it is concerned with vulnerable groups.

8. Item 8 – Other Specific Issues

Response reference:	Representation Issue	National Highways Response
Item 8	<p>Soils, ground conditions, material assets and waste</p> <p><u>Availability of comments from Tameside Metropolitan Borough Council</u></p> <p>a) It is noted that comments are awaited from Tameside Metropolitan Borough Council with regard to the contents of ES Chapter 10 [APP-066]. When will Tameside Metropolitan Borough Council make these be available to be published?</p>	
Item 8	<p><u>Baseline Information</u></p> <p>The Applicant submitted a Hydrogeological Risk Assessment [REP3-025].</p> <p>b) Please could the Environment Agency, local authorities and other Interested Parties provide comments on this document for Deadline4, on Wednesday 16 February 2022?</p>	
Item 8	<p><u>Flood Risk and Drainage</u></p> <p>c) The Environment Agency [REP2-052 Q11.8] notes that the Flood Risk Assessment needs to be updated to reflect the latest climate change allowances, which were published in July 2021. Would the Applicant confirm whether, or not, this has been carried out within the Flood Risk Assessment [REP3-005]?</p>	<p>The A57 design was progressing in early 2021 and as such, a decision had to be made on what climate change allowances should be adopted for the existing baseline scenario and to assess flood risk to and from the proposed development. On 19 January 2021, the Environment Agency agreed to our proposal (via email) to utilise the climate change guidance (based on July 2020 values) as the basis of the existing baseline flood risk scenario and to support the design and assessment of the scheme. On the basis of that agreement the applicant proceeded to undertake the Flood Risk Assessment for submission of the DCO. As the updated climate change guidance only became available towards the end of the assessment in July 2021 the new climate change allowances have not been included within the FRA for DCO submission.</p> <p>However, we recognise that Climate Change guidance has changed and implementation of a flood resilient design over the lifetime of the development is important to the operator and the receptors within the environment. We will therefore look at undertaking a review of flood risk to and from the scheme based on the latest EA climate change guidance as part of Stage 5 Detail Design and an updated FRA will be provided at that stage which will support the submission for Environmental permitting to the Environment Agency</p> <p>Consultation is ongoing with the Environment Agency regarding the above proposal though agreement of the Statement of Common Ground.</p>

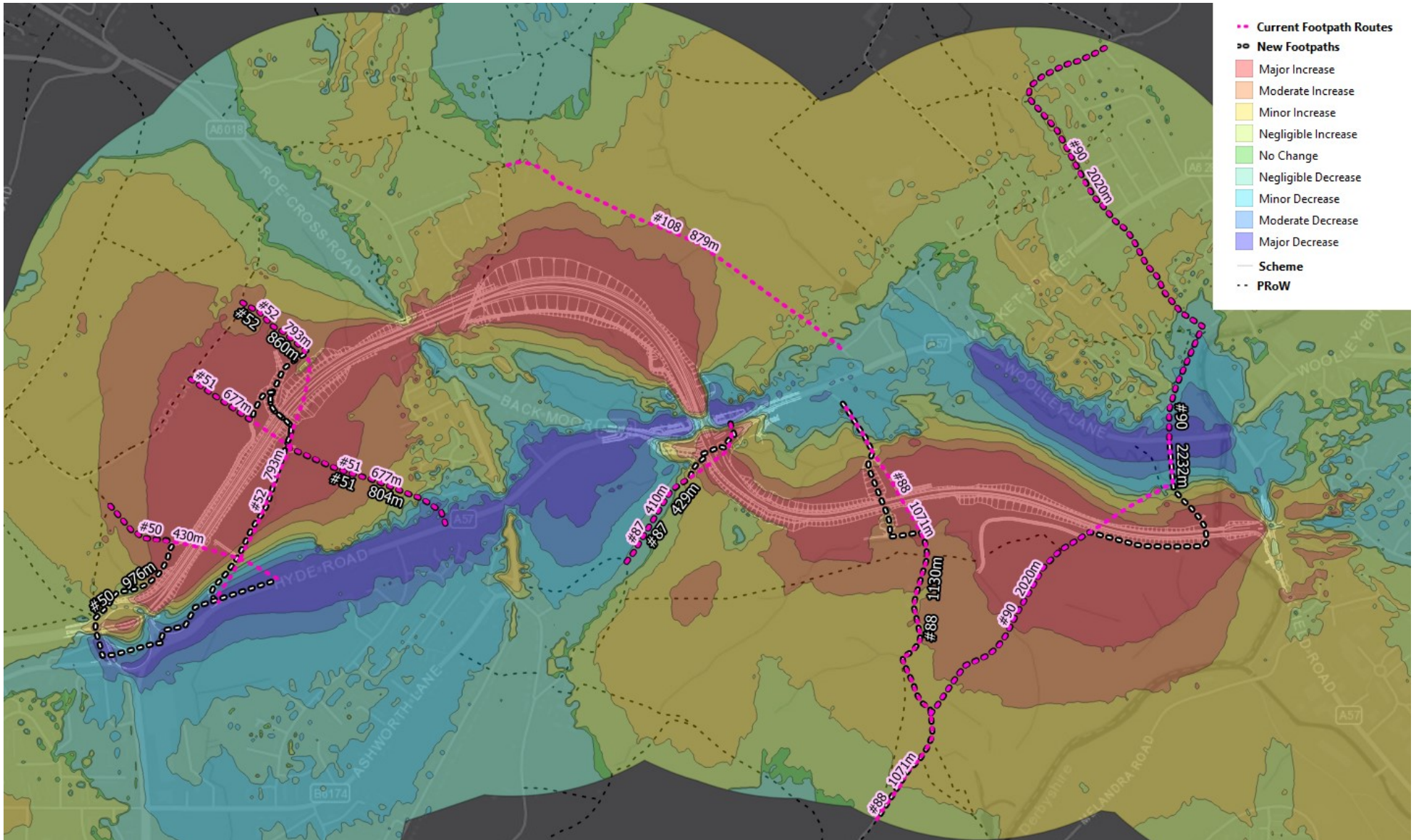
Response reference:	Representation Issue	National Highways Response
Item 8	<p><u>The Water Framework Directive and the Water Environment (WaterFramework Directive) Regulations 2017</u></p> <p>The Environment Agency, [REP2-052 Q1.39] recommend that alternative arrangements are sought for the disposal of pumping test waters due to elevated concentrations of specific substances with an Environmental Quality Statement being present in the groundwater.</p> <p>d) Would the Applicant comment on what alternatives, if any, they have considered and if these are practicable?</p> <p>e) Does the Environment Agency have any comments?</p>	<p>The reference to pumping test waters relates to works carried out in 2021, during which the pumping test waters were discharged to soakaway and no pumping test water was discharged to surface water courses. Recharge of pumping test waters was trialled but was not practicable as groundwater levels in the area are extremely shallow or artesian, so recharge could lead to groundwater seepage at surface.</p> <p>Going forward any further discharges would include full assessment of risk to water course as part of permitting process.</p>
Item 8	<p><u>Water Habitat</u></p> <p>The Environment Agency [REP2-026 Q11.16] said that road salt or grit maypotentially have implications on the water quality of watercourses and consider that the applicant will need to assess this within Chapter 13 Road Drainage and Water Environment</p> <p>f) Will the Applicant be amending Chapter 13 in accordance with this and,if not, would they provide a commentary on their reasoning?</p>	<p>Runoff containing road salt or grit, is expected to be short-term and temporary. The drainage design, incorporating SuDS, meets regulatory/ industry requirements, passing all Highways England Water Risk Assessment Tool (HEWRAT) tests and thus indicating low risk to receiving watercourses. The drainage design would provide for adequate treatment, attenuation and discharge rates such that there would be no deterioration to hydro-morphology and aquatic ecology.</p> <p>The Environment Statement Chapter will be updated to reflect this assessment at Deadline 5</p>
Item 8	<p>Land use, social and economic, human health</p> <p><u>Local social and economic impacts</u></p> <p>Concerns have been raised regarding the effect of increased traffic volumes on Snake Pass affecting land stability on the route, and that this could lead to disruption of the business of the National Trust and its tenants.</p> <p>Similarly, concerns have been raised of the potential for increased traffic volumes on Snake Pass to increase the risk of wildfires. The</p>	

Response reference:	Representation Issue	National Highways Response
	<p>Applicant has sought to address these concerns in their response at Deadline 3.</p> <p>g) Would the National Trust, High Peak National Park Authority and Derbyshire County Council submit any comments that they wish to make in the light of the Applicant's response for Deadline 4, on Wednesday 23 February 2022?</p> <p>The ExA may ask more questions or invite more oral submissions.</p>	
Item 8	<p>Derbyshire County Council [REP2-045] identify potential added benefits for the scheme were it to deliver active travel routes for school routes through industrial estates (Paragraph 15.15).</p> <p>h) Would the local authorities and the Environment Agency please provide comments on each of these by Deadline 4?</p> <p>Would Derbyshire County Council provide further details of the location of these putative routes?</p> <p>i) How would these routes be secured and delivered?</p> <p>j) Does the Applicant have any comments?</p> <p>Tameside Metropolitan Borough Council [REP2-056] Q13.6] identify that the impact on and loss of agricultural land does not appear to have been included in the ES.</p> <p>k) Does the Applicant have any comments on this matter?</p> <p><u>Other environmental topics</u></p> <p>The Applicant [REP3-029] Annexes B1 to B7] has submitted the following outline management plans: -</p>	<p>j) National Highways will respond to proposals submitted into the examination at the appropriate deadline.</p> <p>k) As explained orally during ISH2, National Highways considers that this matter is addressed in its response to Tameside MBC's comments on Written Question 13.9, contained in document reference '9.39 Applicants comments on Written Questions Responses,' pages 63 and 64 (REP3-021). For completeness, the response is copied below:</p> <p><i>An assessment of the impact and loss of agricultural land during the construction and operation phase of the Scheme is contained in the Environmental Statement Chapter 12 Population and Human health (REP2-040).</i></p> <p><i>The assessment methodology for the assessment on land use and health follows the requirements set out in DMRB LA 112 and is also summarised in Sections 12.3 and 12.4 of REP2-040. Paragraphs 12.9.12 to 12.9.17 and Table 12.17 of Chapter 12 of the ES (REP2-040) summarises the residual land use effects on agricultural land holdings during construction.</i></p> <p><i>The Scheme would affect seven agricultural farm holdings resulting in 24ha of permanent land take and 8.3ha of temporary land take.</i></p> <p><i>Additionally, around 2ha of farm holding will be reduced in height for flood compensation. Mitigation in the form of underpasses and alternative accesses is built into the Scheme design, where possible, to prevent permanent severance.</i></p> <p><i>The residual effect of agricultural land take and severance on individual holdings was assessed as being moderate or large adverse during construction, which is significant. Paragraph 12.9.42 to 12.9.44 of REP2-040 describes the operational impacts on agricultural land and concludes that permanent land acquisition and severance will have a moderate to large adverse effect on agricultural land holdings, which is significant.</i></p> <p><i>The loss of land and resultant severance of agricultural land was assessed to have a negative health outcome during construction reducing to neutral during Operation of the Scheme as described in paragraph 12.9.60 and table 12.26 of REP2-040.</i></p>

Response reference:	Representation Issue	National Highways Response
	<ul style="list-style-type: none"> • Outline Soil Resource Plan • Outline Noise and Vibration Management Plan • Outline Construction Water Management Plan • Outline Site Waste Management Plan • Outline Materials Management Plan • Outline Community Engagement Plan • Outline Nuisance Management Plan <p>I) Would the local authorities and the Environment Agency please provide comments on each of these outline management plans for Deadline 5, on Wednesday 23 February 2022?</p>	
Item 8	<p>OTHER MATTERS</p> <p>Please could the Applicant provide a written summary of its responses for Deadline 4, on Wednesday 16 February 2022?</p> <p>Time permitting, and at its discretion, the ExA may invite other oral submissions.</p>	<p>This document is a written summary of National Highways' responses to Issue Specific Hearing 2.</p>

Appendix

Appendix A. Noise contour with footpath locations



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