

A1 in Northumberland: Morpeth to Ellingham

Scheme Number: TR010059

7.27 Applicant's Responses to Deadline 6 Submissions

Rule 8(1)(c)

Infrastructure Planning (Examination Procedure) Rules 2010

Planning Act 2008

May 2021

Infrastructure Planning

Planning Act 2008

**The Infrastructure Planning
(Examination Procedure) Rules
2010**

**The A1 in Northumberland: Morpeth to
Ellingham**

Development Consent Order 20[xx]

Applicant's Response to Deadline 6 Submissions

Rule Reference:	8(1)(c)
Planning Inspectorate Scheme Reference:	TR010059
Document Reference:	7.27
Author:	A1 in Northumberland: Morpeth to Ellingham Project Team, Highways England

Version	Date	Status of Version
Rev 0	May 2021	Deadline 7

CONTENTS

1 APPLICANT'S RESPONSE TO DEADLINE 6 SUBMISSIONS 1

1.1 INTRODUCTION 1

TABLES

Table 1-1 – Environment Agency	2
Table 1-2 – Defence Infrastructure Organisation	36
Table 1-3 – Mark Hawes D6 Submission	36
Table 1-4 – Mark Hawes Written Summary	58
Table 1-5 – Northumberland County Council – Deadline 6 Submission – Post Hearing Notes	62
Table 1-6 – Northumberland County Council - Responses to ExQ2	66
Table 1-7 – Tom Lloyd	71

1 APPLICANT'S RESPONSE TO DEADLINE 6 SUBMISSIONS

1.1 INTRODUCTION

- 1.1.1. This document relates to an application for a Development Consent Order (DCO) made on 7 July 2020 by Highways England (the 'Applicant') to the Secretary of State for Transport via the Planning Inspectorate (the 'Inspectorate') under section 37 of the Planning Act 2008 (the '2008 Act'). If made, the DCO would grant consent for the A1 in Northumberland: Morpeth to Ellingham (the 'Scheme').
- 1.1.2. The Scheme comprises two sections known as Part A: Morpeth to Felton (Part A) and Part B: Alnwick to Ellingham (Part B), a detailed description of which can be found in Chapter 2: The Scheme, Volume 1 of the Environmental Statement (ES) [APP-037].
- 1.1.3. The purpose of this document is to set out the Applicant's response to submissions made at Deadline 6. The Applicant notes that Historic England made a submission at Deadline 6 [REP6-054] but confirmed that they had no comments.

Table 1-1 – Environment Agency

Ref. No.	Response:	Applicant's Response:
Summary of Written Representations - on behalf of the Environment Agency (EA)		
Deadline 5 Submission - 7.3 Updated Outline Construction Environmental Management Plan (Tracked) - Rev 4a [REP5-013]		
1	It is unclear what the hierarchy is between the Updated Outline Construction Environmental Management Plan (CEMP) and 7.9.1.1 Culvert Mitigation Strategy - Rev 1 [REP5-022] as there is a significant degree of overlap between the two documents. Both documents independently contain important details that are not apparent in the other document. We would welcome clarification on this.	<ol style="list-style-type: none"> The Culvert Mitigation Strategy [REP5-022] has been developed to aid the Environment Agency in their review of the following documents by providing a clear and concise summary. <ul style="list-style-type: none"> Water Framework Directive Assessments Part A and Part B [APP-255 and APP-312]; Structures Engineering Drawings and Sections - Rev 2 [REP5-004] Annex A - Approach to the Assessment of Losses and Gains of Watercourses [REP2-010]. Requirement 8(3) of the draft DCO requires the implementation of the measures in the culvert mitigation strategy. The Outline CEMP [REP6-025 and 026] (and as updated at Deadline 7) is the means by which mitigation measures are secured in detail and has been updated to include the measures which are detailed within the Culvert Mitigation Strategy [REP5-022] as these measures are agreed with the Environment Agency.
2	We request that specific acknowledgement of and the need for mitigation and compensation for the loss and damage/disturbance to the many watercourses crossed by the scheme is clearly stated. This needs to be independent of, but as detailed as and on a par with actions like S-B1, S-B2 or S-B20.	<ol style="list-style-type: none"> The Applicant has included a comprehensive mitigation strategy to offset the impacts of the Scheme on the watercourses and channels, this is summarised within the Culvert Mitigation Strategy [REP5-022]. The measures that are detailed within the Culvert Mitigation Strategy and are secured within the Outline CEMP through measure EXA S-W101 [REP6-025 and 026], which has been updated and submitted at Deadline 7. This measure reflects the impacts of the Scheme upon the watercourses. EXA S-W101 is a Scheme wide watercourse / channel mitigation / compensation measure which has been developed in line with the measures S-B1 (habitat compensation) S-B2 (landscape mitigation) and S-B20 (biodiversity enhancement). This details that the measures outlined in the Culvert Mitigation Strategy are to be implemented. The Applicant remains engaged with the Environment Agency to agree the outstanding mitigation requirements, with the next scheduled for 18 May 2021.
3	We are still assessing whether the measures presented to compensate and mitigate for the impact of the scheme on the crossed watercourses is adequate. A number of comments have been made to specific actions in the outline CEMP.	<ol style="list-style-type: none"> The Applicant notes that the Environment Agency are still assessing the Scheme and associated implications, with specific issues addressed below. Furthermore, the Applicant remains engaged with the Environment Agency with the next scheduled for 18 May 2021.
Deadline 5 Submission - 7.22 Applicant's Response to Deadline 4 Submissions [REP5-029]		
4	Ref. No. 1	<ol style="list-style-type: none"> Dry ditch is not listed in the UK Habitat Classification or Defra Biodiversity Metric and therefore not scored as a linear or area habitat

	<p>Phase 1 habitat codes are not used when using the Defra Biodiversity Metric as they require UK Habitat Classification, meaning that the Phase 1 for Dry Ditch must have been converted into a UK Habitat Classification code. The UK Habitat Classification does not have a code / habitat type for Dry Ditch. It is also noted that table 2-2 – Corresponding JNCC Phase 1 Habitat and UK Habitat Classifications within 6.28 Biodiversity No Net Loss Assessment for the Scheme (Clean) for Change Request [REP5-038] omits this detail. We would welcome clarity of what was used for the calculations and if the value as a linear feature has been captured.</p>	<p>feature. As such, dry ditches do not require inclusion within the metric used for the biodiversity not net loss assessment.</p> <ol style="list-style-type: none"> 2. However, the ecological assessment has considered the value and function of dry ditches. Dry ditches were primarily recorded along field boundaries and their value as a linear feature is associated with other features/habitats, such as hedgerows, providing connectivity for wildlife. As channels that are only seasonally or temporarily wet (following periods of rain), the ditches do not provide connectivity for aquatic wildlife (such as fish). Connectivity along the Scheme for terrestrial wildlife (such as badger and bats) would be maintained through the creation of hedgerows (linear features) and the realignment of ditches (such as those features that run into Fenrother Burn (Part A), Earsdon Burn (Part A) and the Kittycarter Burn (Part B)).
5	<p>According to the current package of compensatory works detailed within 7.9.1.1 Culvert Mitigation Strategy - Rev 1 [REP5-022], a total of 1240m of riparian planting is included to compensate for the loss of 427m of watercourse. The figure of 427m only captures the length of the culvert and does not take into account the easement either side of the new or extended bridges that will require being cleared of all vegetation and possibly any bank features to allow construction to take place. As such, on watercourses such as Floodgate Burn or the River Lyne where substantial riparian woodland already exists, the loss and impact is not clearly represented and is expected to be much larger than 427m.</p>	<ol style="list-style-type: none"> 1. The Applicant can confirm that it is predicted that the Scheme would result in the loss of 427m of watercourse, as detailed within Annex A - Approach to the Assessment of Losses and Gains of Watercourses [REP2-010]. This comprises 271m for Part A and 156m for Part B. 2. The Culvert Mitigation Strategy [REP5-022] only identifies the length of culvert (new or extended) and the associated direct impacts, the impacts on loss of watercourse are identified and discussed in item 15, in relation to Annex A - Approach to the Assessment of Losses and Gains of Watercourses [REP2-010]. This comprises 271m for Part A and 156m for Part B. 3. Riparian planting is one measure within the compensation / mitigation strategy for the impacts of the Scheme on the channels as detailed within the Culvert Mitigation Strategy [REP5-022]. The other measures included within the comprehensive mitigation package are: <ol style="list-style-type: none"> a. Fish baffles b. Realigned watercourses c. Improvements to Longdike Burn 4. The Applicant can also confirm that 1,240m of riparian planting is to be provided. Noting that the riparian planting, which will provide improvements to the watercourses to offset the impacts is one of the compensation measures included in the Scheme for loss of watercourse – i.e. it is not the only mitigation/compensation measure proposed. 5. The riparian planting proposed will either be on channels with clear banks or those with sporadic / semi continuous cover to provide an enhancement to the current conditions. 6. This riparian planting represents is a significant length when compared to the length of watercourse lost. 7. The vegetation loss is shown on the Vegetation Clearance Plans for Change Request [REP4-040]. 8. To assist the interpretation by the Environment Agency and demonstrate the net impact of riparian planting as a result of the Scheme a watercourse specific plan will be submitted at Deadline 8, further context on these plans is provided in the response to Item 6. 9. The Applicant continues to engage with the Environment Agency with regard to the loss of watercourse as a result of culverting across the

		<p>Scheme. The position of the Applicant is that sufficient measures have already been identified to mitigate and/or offset the assessed impacts, although the Environment Agency disagree. In the Environment Agency Deadline 5 Submission [REP5-044], the Environment Agency outlined that the culverting and loss of watercourses as a result of the Scheme could be offset / compensated outside of the DCO boundaries, this remains under discussion.</p>
6	<p>Furthermore, much of the claimed riparian planting is either where existing riparian woodland already exists on these burns. Therefore, it is unclear how much of the 1240m is to replace what is to be lost due to the scheme and what is compensatory.</p>	<ol style="list-style-type: none"> 1. A set of plans demonstrating how the riparian planting will contribute to the compensation for the loss of channel will be submitted at Deadline 8. It is proposed that these plans include: Aerial imagery (i.e. demonstrating the current conditions) Lengths and locations of the proposed riparian planting (as detailed in the Culvert Mitigation Strategy [REP5-022]) Locations of the watercourses (OS mapping derived) Post Construction Scheme Layout [REP6-005] Land plans [REP6-003] Landscape Mitigation Plans [REP4-010 and REP6-018] Vegetation Clearance Plans [REP4-040] 2. From this information it is anticipated that the Environment Agency will be in a more informed position to understand the proposals and the differences between replacement and compensation planting.
7	<p>The Applicant must clearly demonstrate not only the loss of watercourse due to culverting, but also the length of existing riparian habitat lost to ensure it is clear where the riparian planting is compensation for loss of existing riparian, or compensation for the loss of watercourses through culverting.</p>	<ol style="list-style-type: none"> 1. This relates to the issue addressed in Item 5 and will be demonstrated on the set of plans to be issued at Deadline 8.
8	<p>The Applicant is suggesting to undertake 'nutrient management measures, aquatic planting and bankside stabilisation' on Longdike Burn. We are concerned that this may be claimed as compensation without any evidence that these issues are present within the proposed area or are in fact causing a degradation of the watercourse. We would also welcome further information regarding how these areas are to be maintained and protected once returned to landowners.</p>	<ol style="list-style-type: none"> 1. The Applicant provided further details on the proposals for Longdike Burn at Deadline 6 in Item 38 of Table 1-1 of the Applicant's Response to Deadline 5 and 5a Submissions [REP6-040] which is supported by Appendix iii – Indicative Longdike Burn Proposals [REP6-042]. This details that the following measures are proposed: <ul style="list-style-type: none"> • Riparian woodland planting (subject to detailed design this could include native tree species) • Enhancements to an existing berm with suitable planting particularly wetland tolerant / amphibious vegetation. • Aquatic macrophyte planting to compliment the riparian planting and enhancements to the berm feature. • Understorey planting (this may be beneficial along other parts of the reach) this could include amphibious or reeds or rushes. 2. The Applicant is no longer proposing to undertake bankside stabilisation or nutrient management measures in isolation, but notes that the planting will assist in managing any nutrients or sediments which currently reach the burn from the adjacent golf course or the coniferous plantation as this type of tree stands typically have poor or absent understorey and thus increase fine sediment delivery and runoff to watercourses. 3. The Land Plans [REP6-003] demonstrate that the land in which the Longdike Burn is proposed to be enhanced is to be permanently acquired by the Applicant and will therefore be managed appropriately. This will be set out in the LEMP, which is secured within ExA: S-L100 of

		the Outline CEMP [REP6-025 and 026] (and updated at Deadline 7), and this will then be adopted into the HEMP.
9	With respect to point 1 of the Applicant's response, it states that 'Additional improvement measures identified that collectively form the current package of compensatory works include design of realigned watercourse channels (138m, Part A) to be better (in terms of environmental condition and biodiversity value) than that lost'. We would welcome clarification as to how the delivery of improvement measures to a section of watercourse that is to be realigned as part of the scheme can be classed as compensation?	<ol style="list-style-type: none"> 1. This point was addressed in item 2 of table 1-4 of The Applicant's Response to Deadline 4 Submissions [REP5-029]. The Applicant considers that if the realigned watercourses were to be constructed in the same condition / state as they currently are, this would be mitigation. However, as they are to be constructed so as to be an improvement over and above that lost, this is additional mitigation for the impacts of the Scheme on the channels and therefore forming part of the overall package of mitigatory works detailed within the Culvert Mitigation Strategy [REP5-022].
10	<p>Ref. No. 3</p> <p>We hold data that shows 3 records of otter within 2km within the last 10 years (2015, 2016 and 2017). On 29/04/21 the EA undertook a site visit to Shipperton Burn in Part B of the scheme. An abundance of otter spraints were found both upstream and downstream of the structure, indicating the burn is actively used by otters. In total 6 sprainting locations were found within 200m of the scheme, with the closest c.10m upstream from the road boundary. We have provided the Applicant with this evidence.</p>	<ol style="list-style-type: none"> 1. As detailed in the Applicant's Response to Deadline 4 Submissions [REP5-029], the most recent otter record within the dataset obtained by the Applicant for Part B (2km search area from Order limits) dates back to 2015, located 1km from Part B. As detailed in the Applicant's Written Summaries of Oral Submissions to Hearings issued at Deadline 6 [REP6-044], the records from 2016 and 2017 for Part B referred to by the Environment Agency were not present within the Applicant's data set. However, following further discussion with the Environment Agency, the Applicant acknowledges the two otter records from 2016 and 2017, which are located approximately 2km from Part B. 2. Following Issue Specific Hearing 3, the Applicant held discussions with the Environment Agency on 23 and 30 April 2021 to explore the evidence for the presence of otter. Further evidence of otter adjacent to the study area for Part B (along Shipperton Burn) was provided by the Environment Agency at the meeting on 30 April, and the Applicant is considering this and the potential need for fencing along Part B at key crossing locations. 3. The Applicant is discussing ideas for mammal fencing at four locations along Part B. The Applicant is actively engaging with the Environment Agency on this matter and is making progress to seek a resolution. Further discussions will be captured within the Statement of Common Ground with the Environment Agency [REP6-032] at Deadline 8.
11	In light of this clear evidence of use by otters, we request that the Applicant takes into account this evidence and reevaluates their assessment for otter in Part B, specifically the risks posed by the Shipperton Burn culvert. This should include the provision of appropriate mitigation measures.	<ol style="list-style-type: none"> 1. As detailed in response 10 above, following Issue Specific Hearing 3, the Applicant held discussions with the Environment Agency on 23 and 30 April 2021 to explore the evidence for the presence of otter. Further evidence of otter adjacent to the study area for Part B (along Shipperton Burn) was provided by the Environment Agency at the meeting on 30 April, and the Applicant is considering this and the potential need for fencing along Part B at key crossing locations. The Applicant is discussing ideas for mammal fencing at four locations along Part B. The Applicant is actively engaging with the Environment Agency on this matter and is making progress to seek a resolution. Further discussions will be captured within the Statement of Common Ground with the Environment Agency [REP6-032] at Deadline 8.
12	In response to the Applicant's response, point 4, we welcome the additional measure. However, this is highly reactive to the death of a European protected species and does not apply the precautionary principle given the records and evidence presented.	<ol style="list-style-type: none"> 1. As detailed in Appendix F Otter Position Statement [REP6-048], during Issue Specific Hearing (ISH) 3, the Environment Agency confirmed that they consider otter widespread in Northumberland and would therefore support the application of the precautionary

		<p>principle (i.e. assume presence). Notwithstanding its scoping exercise and correspondence with the Environment Agency on EIA, the Applicant was not informed or aware of this position prior to the submission of the application for the Scheme and made an assessment of otter based on desk study records obtained from the local records centre (Environmental Records Information Centre (ERIC) North East) and surveys undertaken by the Applicant between 2016 and 2019. The Applicant was not made aware that a precautionary approach is assumed necessary to be taken.</p> <p>2. As detailed in Appendix F Otter Position Statement [REP6-048], “The Applicant’s conclusion of likely absence is set out in full within Items 3 and 20-26, Table 1-4 of the Applicant’s Response to Deadline 4 Submissions [REP5-029]. By way of summary, desk study records for Part B identified historic otter records, with the most recent record returned from 2015 approximately 1km to the east of the A1 carriageway. The most recent otter casualty on the A1 (within the Order limits of Part B) dates back to 2011. In addition to the desk study, otter field surveys for Part B were undertaken by experienced surveyors in accordance with best practice guidelines (Chanin, 2003)¹. Surveys were undertaken along watercourses spanning either side of the existing A1 carriageway in 2016, 2017, 2018 and 2019, with no evidence of otter activity or presence recorded along any watercourses or riparian habitat within the Order limits or survey area. Of the historic nature of the desk study results, the negative field survey results over a number of years and the presence of predominantly suboptimal habitats to support the species informed a “likely absent” classification for otter within the Part B Order limits.”</p> <p>3. Post-construction monitoring, measure B-B30 of the Outline CEMP [REP6-025 and 026] (and as updated at Deadline 7), was an additional measure proposed at Deadline 5 in response to the Applicant’s position at the time and the conclusion of likely absence of otter for Part B. However, as detailed in responses 10 and 11 above, following Issue Specific Hearing 3, the Applicant held discussions with the Environment Agency on 23 and 30 April 2021 to explore the evidence for the presence of otter. Further evidence of otter adjacent to the study area for Part B (along Shipperton Burn) was provided by the Environment Agency at the meeting on 30 April, and the Applicant is considering this and the potential need for fencing (mitigation) along Part B at key crossing locations. The Applicant is discussing ideas for mammal fencing at four locations along Part B. The Applicant is actively engaging with the Environment Agency on this matter and is making progress to seek a resolution. Further discussions will be captured within the Statement of Common Ground with the Environment Agency [REP6-032] at Deadline 8.</p> <p>¹ Chanin P (2003). Monitoring the Otter <i>Lutra lutra</i>. Conserving Natura 2000 Rivers Monitoring Series No. 10, English Nature, Peterborough</p>
13	Ref. No 4, point 3	<p>1. The Environment Agency is referencing Item 4 point 3 of Table 1-4 of the Applicant’s Response to Deadline 4 Submissions [REP5-029]. This</p>

	<p>We do not agree that the proposed level of compensation is adequate for the loss of or damage to watercourse and riparian habitat that will be realised due to the delivery of the scheme.</p>	<p>remains under discussion with the Environment Agency and will be one of the key topics for the meeting on 18 May 2021.</p> <ol style="list-style-type: none"> The Applicant considers that the level of compensation is sufficient for the loss or damage to watercourse and riparian habitat as a result of the delivery of the Scheme due to the substantial lengths of improvement being proposed as detailed in the response to Item 5. Item 5 outlines that 427m of watercourse will be lost as a result of the Scheme and 1,240m of riparian planting is to be provided, as one of the compensation measures as detailed in the response to Item 8. The Applicant continues to engage with the Environment Agency with regards to the loss of watercourse as a result of culverting across the Scheme, with the next meeting scheduled 18 May 2021.
<p>14</p>	<p>Ref.No4a We welcome that further details and clarity around the proposed improvements to the Longdike Burn. It is noted that this information will be provided at Deadline 7.</p>	<ol style="list-style-type: none"> As detailed in the response to Item 8 above, the Applicant submitted information on the proposals for Longdike Burn at Deadline 6 in Item 38 of Table 1-1 of the Applicant's Response to Deadline 5 and 5a Submissions [REP6-040] which is supported Appendix iii – Indicative Longdike Burn Proposals [REP6-042] and remains in discussions with the Environment Agency on this aspect, with a further meeting scheduled for 18 May 2021.
<p>15</p>	<p>Ref. No.6 The figure presented for the loss of watercourse is 427m. We are unclear if this simply relates to the length of the culvert, or the headwalls and other physical modifications that result in the loss of natural bank / riparian vegetation removal. Where tree planting is often replaced at a ratio of at least 3:1 to account for unsuccessful establishment, and to counter the short term loss overall biomass and biodiversity value, watercourses here are simply being replaced at a 1:1 ratio based only on the length of the culvert and not the other construction features associated with such strictures.</p>	<ol style="list-style-type: none"> This response should be read in conjunction with the responses to Items 5 and 13 of this document. The Applicant can confirm that it is predicted that the Scheme would result in the loss of 427m, as detailed within Annex A - Approach to the Assessment of Losses and Gains of Watercourses [REP2-010]. This comprises 271m for Part A and 156m for Part B. These values represent the loss of linear length of watercourse channel. The loss of watercourse channel does not just simply relate to the length of a culvert/culvert extension and does take into account features such as headwalls and other physical modifications to the channel, such as realignment of channels, that result in the loss of natural channel (including bank and associated riparian vegetation). For example, on Floodgate Burn, the proposed extension to the culvert is approximately 6.7m (see Culvert Mitigation Strategy [REP5-022]). However, due to the additional realignment of the channel, the loss of watercourse is calculated to be 40.6m. The measurements have been informed by the length of culvert or culvert extension, Structures and Engineering Drawings and Sections [REP5-004], Phase 1 habitat plans (Part A [APP-105 and REP2-010] and Part B [APP-155] and aerial imagery. As such, the calculated loss of channel is accurate as far as reasonably practicable with the information available. The Environment Agency have incorrectly referred to watercourses being "replaced at a 1:1", which is not the case. As detailed in the Applicant's Response to Deadline 4 Submissions [REP5-029] (response 54), both the Applicant and the Environment Agency agree that it is not viable to create new lengths of watercourse as compensation (the exception being where watercourses are being realigned). Therefore, watercourses are not being "replaced" and a ratio has not been applied.

		<ol style="list-style-type: none"> 6. Given that it is not viable to create new lengths of watercourse, in the absence of natural source of water, the Applicant has developed a package of compensatory and improvement measures to offset the loss of watercourse as a result of the Scheme. These include the design of realigned watercourse channels (138m, Part A) to be better (in terms of environmental condition and biodiversity value) than that lost, improvements along the length of Longdike Burn that falls within the Order limits, retrospective installation of fish baffles on the existing culvert of the River Lyne (Part A) that is not impacted by the Scheme, replacement of the wooden baffles within an existing culvert of Longdike Burn (Part A) unaltered by the Scheme to increase the life span of this feature and the provision of riparian planting along watercourses. 7. The Applicant continues to engage with the Environment Agency with regards to the loss of watercourse as a result of culverting across the Scheme. The position of the Applicant is that sufficient measures have been identified to mitigate and/or offset the assessed impacts, although the Environment Agency disagree. In their Deadline 5 response [REP5-044], the Environment Agency outlined that the culverting and loss of watercourses as a result of the Scheme could be offset / compensated outside of the DCO boundaries, this remains under discussion. 8. For clarity, whilst the Environment Agency state that tree planting "is often replaced" at a ratio of at least 3:1, such a ratio has not been required through discussion with Northumberland County Council for the Scheme.
16	<p>Ref. No.50 We do not agree that the 'retrospective installation of fish baffles on the existing culvert of the River Lyne (Part A), replacement of the wooden baffles within an existing culvert of Longdike Burn (Part A)' constitutes as compensation for the loss of watercourse and riparian habitat that will be realised by this scheme. It is a legal obligation to maintain fish passage under the Salmon and Fresh Water Fisheries Act.</p>	<ol style="list-style-type: none"> 1. As detailed in the Applicant's Response to Deadline 4 Submissions [REP5-029] (response 54), both the Applicant and the Environment Agency agree that it is not viable to create new lengths of watercourse as compensation (the exception being where watercourses are being realigned). 2. The Applicant acknowledges that the measures regarding installation of fish baffles do not directly offer like-for-like compensation for the loss of watercourse and riparian habitat. However, these measures are put forward as improvements as part of the wider package of measures (detailed above in response 15) to offset the impacts of the Scheme. 3. The retrospective installation of fish baffles on the existing culvert of the River Lyne (Part A) relates to a culvert beneath the existing A1 that is unaffected by the Scheme (i.e. no proposal for removal, replacement or extension). As such, the maintenance of fish passage within the culvert would not be changed by the Scheme. The proposed retrospective installation of fish baffles represents an improvement measure along the watercourse that would not otherwise be secured in the absence of the Scheme. 4. Similarly, the replacement of the wooden baffles within an existing culvert of Longdike Burn (Part A) with a more long-lasting material also represents an improvement to a culvert that would otherwise be unaltered by the Scheme. 5. The maintenance of fish passage within the culvert would not be changed by the Scheme, but the replacement of the wooden baffles would increase the life span of the feature thereby securing an

		improvement to current conditions. Highways England is already in compliance with obligations with regard to fish passage – this represents an improvement.
Deadline 5 Submission - 7.21 Applicant's Response to ExA's Further Written Questions [REP5-023]		
17	<p>The Slope Stability and Southern Access works has the potential to have a locally significant impact on the River Coquet. The temporary river training works and the scour protection/rock armour will lead to the loss riparian habitat, will fix the river to the current planform, and will change local flow regimes and sediment dynamics. The work will also decouple the river from the surrounding slopes, and the sediment they supply. It is also likely that the changes to the channel dynamics extend beyond the footprint of the scheme.</p>	<ol style="list-style-type: none"> 1. The Applicant disagrees that the slope stabilisation and southern access works have the potential to have a locally significant impact on the River Coquet with respect to geomorphology. The Applicant sets out the criteria for determining the magnitude of impact in Table 9-2 and Table 8-2 of Environmental Statement Addendum: Stabilisation Works for Change Request [REP4-063] and Environmental Statement Addendum: Southern Access Works for Change Request [REP4-064] respectively, which has been adapted from Table 5-2 of Appendix 10.7 Geomorphology Assessment – River Coquet Parameter 10 Part A of the ES [APP-260]. When assessing the proposed works, it was determined that the magnitude of impact on geomorphology is considered to be of minor adverse magnitude, as a result of the localised nature and limited extent of any changes. 2. The Applicant does, however, agree that the slope stabilisation and southern access works would result in a significant effect with respect to the River Coquet and Coquet Valley SSSI. The loss of riverbank habitat is unlikely to affect the integrity of the River Coquet and Coquet Valley SSSI or its ecological function, due to the short length of bank habitat affected (in comparison to the scale of the wider SSSI unit) and the predicted minor adverse impacts to geomorphology (Table 9-8, Environmental Statement Addendum: Stabilisation Works for Change Request [REP4-063] and Table 8-8, Environmental Statement Addendum: Southern Access Works for Change Request [REP4-064]). However, the loss of riverbank habitat is concluded to result in a significant effect (direct, permanent Moderate adverse effect) to the SSSI (paragraph 8.10.6, Environmental Statement Addendum: Stabilisation Works for Change Request [REP4-063] and paragraph 7.10.6, Environmental Statement Addendum: Southern Access Works for Change Request [REP4-064]). 3. As noted in Table 9-7 of Environmental Statement Addendum: Stabilisation Works for Change Request [REP4-063] and Table 8-7 of Environmental Statement Addendum: Southern Access Works for Change Request [REP4-064], construction of the temporary river training works could create a short-term increase in the volume of fine sediment directly entering the channel and consequently increase turbidity. The restriction of flow and reduced channel width at all flows may alter the sediment transport capability of the river, enabling the transport of larger material at lower flows compared to the baseline. Impacts are likely to be temporary and reversible following completion of construction and reinstatement works. Bank and bed features would be degraded within the footprint of the works, although some channel bed impacts may be reversible following end of construction with mitigation provided to reinstate features where practicable, although any loss of bedrock may not be reversible. The temporary river training works could

		<p>alter the channel dynamics, which could result in increased erosion and sediment transport rates. Impacts may cease following end of construction.</p> <ol style="list-style-type: none"> 4. As noted in Table 9-8 of Environmental Statement Addendum: Stabilisation Works for Change Request [REP4-063] and Table 8-8 of Environmental Statement Addendum: Southern Access Works for Change Request [REP4-064], the permanent scour protection may lead to a permanent but localised reduction in the availability of erodible sediment. Locally, the banks are not considered to be an important source of sediment for the channel. Some bank and near-bank bed features would be lost within the footprint of these works. The existing bank profile would be reinstated so alterations in channel cross section are anticipated to be minimal. Some alterations to channel roughness may occur. A reduction in roughness compared to the existing tree line bank may locally increase erosion rates. However, impacts are likely to be small, very localised to the channel margins and limited to the extent of the scour protection. The change in materials from which the bank is composed would, by design, reduce the channel's ability to adjust its position naturally and mature riparian vegetation would be lost. Increased run off may occur locally due to immature vegetation. 5. The form of the catchment is controlled by the underlying geology and topography, the dominance of bedrock suggests that the timescales for adjustment are over hundreds to thousands of years, with lateral adjustment of the channel and bed constrained by the valley form. Whilst the rock armour would act as a barrier to any lateral movement, over the 120 year design life of the proposals, any lateral movement, in the absence of the proposals, would likely be very limited, given the substantial period of time over which channel adjustments would occur. 6. The Applicant agrees that the north bank proposals may have the potential to decouple the slopes from the channel. However, the slope stabilisation works are intended to be localised in their extent to the slopes around the proposed north bank pier location and necessary for the integrity of the bridge pier foundations. There have been a number of valley side failures within the gorge, which have delivered sediment to the river. These failures will have historically supplied material to fluvial system and, at some locations in the gorge, continue to do so through the erosion of their toes. The change to planform caused by these failures is likely to be temporary and localised as fluvial action removes finer failed sediment. However, large boulders may continue to have an influence on local flow conditions over longer periods. Specifically at the location of the north bank works, a wide, relatively gently sloping area adds significant lag to input of sediment from failures of the upper valley side to channel, as it will rest in this gently sloping area until removed by flooding. 7. For the south bank, the primary route for delivery of material from the valley side to the river is from rockfalls. It is anticipated that any rockfalls on the south bank could still reach the channel, as the slope is steeper compared to the north bank, with some being arrested by the presence of trees. On this basis, it is not anticipated that the south bank slope
--	--	---

		<p>processes would be decoupled from the channel by the presence of rock armour.</p> <p>8. The Applicant does not agree that the proposals would impact the channel response beyond the footprint of the works for the reasons set out above. The bank protection works are not considered to change the morphological behaviour of the reach, or the function as a sediment transfer zone (Table 9-8 of Environmental Statement Addendum: Stabilisation Works for Change Request [REP4-063] and Table 8-8 of Environmental Statement Addendum: Southern Access Works for Change Request [REP4-064]).</p>
18	<p>We do not share the Applicant's expectation that the information relating to the impacts of the changes associated with the Slope Stability and Southern Access works, will not change the findings of the geomorphological assessment and that there will be no significant effects as set out in Environmental Statement Addendum: stabilisation works – Rev 1 [Rep4-063] and Environmental Statement Addendum: southern access works – Rev 2 [Rep4-064]. Our position will be guided by the new work the Applicant is currently undertaking.</p>	<ol style="list-style-type: none"> 1. As set out in response 17 above, whilst the Applicant's assessments do not conclude significant effects with respect to geomorphology, a significant effect is concluded with respect to the River Coquet and Coquet Valley SSSI. 2. The Applicant has now provided the full quantitative geomorphological dynamics assessment, completed with consideration of the outputs from hydraulic modelling, submitted as part of the Examination at Deadline 7 (River Coquet Fluvial Geomorphology Assessment (Document Reference 6.47)). This allows for verification of the results and assessment presented in Environmental Statement Addendum: Stabilisation Works for Change Request [REP4-063] (Chapter 9) and Environmental Statement Addendum: Southern Access Works for Change Request [REP4-064] (Chapter 8) and provides further detail on the spatial extents and changes in flow and sediment behaviours in the vicinity of the proposed works. 3. In the Scheme construction scenario, the assessment concludes that the extent and magnitude of the anticipated changes from the baseline are as reported in Environmental Statement Addendum: Stabilisation Works for Change Request [REP4-063] and Environmental Statement Addendum: Southern Access Works for Change Request [REP4-064], with the exceptions of the extent of the 'backwater' effect as a result of the temporary works and the increases in stream power and modelled sediment entrainment potential. However, the potential for these changes from baseline were identified qualitatively in 6.38 Environmental Statement Addendum: Stabilisation Works for Change Request [REP4-063] and Table 8-7 and Table 8-8 of 6.40 Environmental Statement Addendum: Southern Access Works for Change Request [REP4-064] and, with the suggested mitigation, are not considered to significantly affect features of interest such as the mid-channel bar. As such, the overriding considerations in determining the significance of effect of the Scheme in the construction scenario stand, i.e. that the works are of relatively short duration and the effects on fluvial processes are reversible. 4. In the Scheme operational scenario, the assessment concludes that the extent of anticipated changes are as reported in Environmental Statement Addendum: Stabilisation Works for Change Request [REP4-063] and Environmental Statement Addendum: Southern Access Works for Change Request [REP4-064], with notable change from the baseline

		<p>being confined to the margins of the channel within the extent of the Scheme and immediately downstream.</p> <p>5. The Magnitude of Impact for the both the Stabilisation Works and Southern Access Works therefore remains the same as that presented (Minor adverse) in Table 9-7 and Table 9-8 of 6.38 Environmental Statement Addendum: Stabilisation Works for Change Request [REP4-063] and Table 8-7 and Table 8-8 of 6.40 Environmental Statement Addendum: Southern Access Works for Change Request [REP4-064], and therefore the Significance of Effect for all geomorphological impacts remains Slight (not significant).</p>
Deadline 5 Submission - 7.23 Applicant's Response to Procedural Decision on Changes to the Application [REP5-032]		
19	<p>The Flood Risk Assessment must be updated to reflect the Hydraulic Modelling outputs. Without an update to the FRA it will be difficult to assess the flood risk impacts from the proposed changes. The EA's review of the hydraulic model will be limited to whether the model is "Fit for purpose".</p>	<ol style="list-style-type: none"> 1. A Flood Risk Assessment Addendum (Flood Risk Assessment Addendum – River Coquet [REP1-067]) has been submitted to the Examination at Deadline 7. 2. This concludes that with the exception of a localised decrease in flood levels (compared to that previously assessed) in the vicinity of the new crossing, there is no change in operational flood risk to local receptors as a consequence of the new pier positions and rock armour scour protection system. 3. With regards to the construction phase, the hydraulic model has identified a hitherto unidentified impact on flood levels upstream of the new crossing. Whilst this impact results in a maximum increase in flood level of 0.144m in the vicinity of receptor A (Otter House / Shothaugh Farm) during the 0.1% AEP (1000-year) event, this is insufficient to change the flood risk to this receptor in real terms which remains 3.244m above the 0.1% AEP (1000-year) flood level during construction. The impact of this increase in flood level is seen on farmland which is already subjected to extensive flooding during the 0.1% AEP (1000-year) event.
Deadline 5 Submission - Change Request - 6.28 Biodiversity No Net Loss Assessment for the Scheme (Clean) - Rev 3 [REP5-038]		
20	<p>We would welcome a package of works that will provide appropriate compensation for the loss of watercourses. We would encourage opportunities to compensate for this loss with equivalent river based units. Where river units or length are lost, common compensation measures could include the re-naturalising and re-meandering of heavily modified and straightened watercourses.</p>	<p>The Applicant continues to engage with the Environment Agency with regards to the loss of watercourse as a result of culverting across the Scheme. The position of the Applicant is that sufficient measures have been identified to mitigate and/or offset the assessed impacts, although the Environment Agency disagree. In the Environment Agency Deadline 5 Submission [REP5-044], the Environment Agency outlined that the culverting and loss of watercourses as a result of the Scheme could be offset / compensated outside of the Order limits, this remains under discussion.</p>
Deadline 5 Submission - Change Request - 6.45 Borrow Pit Dewatering Plan [REP5-040]		
21	<p>The information outlined in this document addresses our previous comments. The Applicant may need a permit from the EA for dewatering activities.</p>	<ol style="list-style-type: none"> 1. A groundwater dewatering permit will be applied for prior to construction phase. 2. Commitment EA-W1 of the Outline CEMP [REP6 025 and 026] has been updated at Deadline 7 to include: "A water resources abstraction licence (for dewatering activities) and Environmental Permit (for water discharge) will be required for the Scheme."
Deadline 5 Submission - 7.6C Statement of Common Ground with Environment Agency - Rev 2 [REP5-017]		

22	We are working with the Applicant to address the issues outlined in this letter and in our previous correspondence.	1. The Applicant remains committed to ongoing liaison with the Environment Agency to address the outstanding issues and has a meeting scheduled on 18 May 2021 to continue the discussions.
Deadline 5 Submission - 3.1 draft Development Consent Order (Clean) - Rev 6 [REP5-005]		
23	It is our understanding that the Applicant does not seek to disapply any of the EA's consenting regimes the Protective Provisions in the draft DCO are acceptable.	2. It is correct that the EA consenting regimes are not disapplied and hence no changes are required to the protective provisions in the draft DCO.
EA Written Representations		
Deadline 5 Submission - 7.3 Updated Outline Construction Environmental Management Plan (Tracked) - Rev 4a [REP5-013]		
General Comments		
24	It is unclear what the hierarchy is between the Updated Outline Construction Environmental Management Plan (CEMP) and 7.9.1.1 Culvert Mitigation Strategy - Rev 1 [REP5-022] as there is a significant degree of overlap between the two documents. Both documents independently contain important details that are not apparent in the other document. We would welcome clarification on this.	1. This comment is repeated above. A response is provided against Item 1 of this document.
25	Within the scheme wide section of the outline CEMP, we request that specific acknowledgement of and the need for mitigation and compensation for the loss and damage/disturbance to the many watercourses crossed by the scheme is clearly stated. This needs to be independent of, but as detailed as and on a par with actions like S-B1, S-B2 or S-B20.	3. This comment is repeated above. A response is provided against Item 2 of this document.
26	We are still assessing whether the measures presented to compensate and mitigate for the impact of the scheme on the crossed watercourses is adequate. Aside from the Water Framework Directive, the EA has legal duties under the Environment Act 1995, the Water Environment (Water Framework Directive) Regulations 2017 and the Natural Environment and Rural Communities Act 2006 to ensure that watercourses are protected and enhanced for the benefit of present and future generations.	4. This comment is repeated above. A response is provided against Item 3 of this document. Further, the Applicant acknowledges the legal duties of the Environment Agency.
27	The current package of compensatory works includes 1240m (a combined total of riparian planting outlined in 7.9.1.1 Culvert Mitigation Strategy - Rev 1 [REP5-022]) of riparian planting to compensate for the loss of 427m of watercourse. The loss of 427m is considered a minimum figure as it only covers the length of the culvert and does not cover the easement either side of the new or extended crossings. Furthermore, it does not cover any vegetation removal and bank re-profiling that may be required to allow construction to take place. Nor does not consider the influence of the culvert on river processes beyond the footprint of the structure itself.	1. This comment is repeated above. A response is provided against Items 5, 8, 13 and 15 of this document.
28	Watercourses such as Floodgate Burn or the River Lyne where substantial riparian woodland already exists, the loss and impact is not clearly represented and is expected to be much larger than 427m. Much of the claimed riparian planting is where existing riparian woodland already exists on these burns. The Applicant must clearly demonstrate not only the loss of watercourse due to culverting, but also the length of existing riparian habitat lost.	1. This comment is repeated above. A response is provided against Items 5 and 6 of this document. Noting that a set of plans demonstrating how the riparian planting contributes to the compensation for the loss of channel will be submitted at Deadline 8.
29	We require for the mitigation measures to be clearly stated, a commitment to the establishment of viable, sustainable natural beds within the key culverts and a comprehensive package of compensation measures. This should be clearly marked on a reliable mitigation and compensation plan, and should not be solely dependent on riparian planting.	1. With regard to the natural beds within the culverts the Applicant is currently considering the feasibility of incorporating a greater depth of natural beds within the culverts. However, the Applicant considers that the depth of the natural beds has been designed in line with the

		<p>appropriate guidance, as detailed in the Applicants Response to Deadline 5 submissions in Table 1-1, Item 18 at Deadline 6 [REP6-040].</p> <p><i>In relation to the culverts, the Applicant previously responded to this question in response 47 of Table 1-4 of REP5-029 which states:</i></p> <ol style="list-style-type: none"> 1. <i>The Scheme has been developed over a number of years, during which time the best practise guidance has been updated, the original design was undertaken in accordance with The CIRIA Culvert Design and Operation Guide (C689). However, in the intervening period this has been superseded by the CIRIA Culvert, Screen and Outfall Manual (C786). It should be considered that the best practise guidance has been developed to enable the safe passage of coarse fish, brown trout, sea trout and salmon. These would not be present in the vast majority of the watercourses crossed by the Scheme and therefore not directly relevant. Full justification of this on a watercourse by watercourse approach is provided in the Culvert Mitigation Strategy [REP1-066], as revised and submitted as part of Deadline 5 [REP5-022].</i> 2. <i>The standards for the design of the Scheme, at the time of design, was HA107/04 Design of Culvert and Outfall Details, this requires a bed level of 150mm or 75mm for a ditch culvert. It is this standard which was applied in the design and previously discussed with the Environment Agency.</i> 3. <i>For Part A this was on 09/01/18, during which the Environment Agency agreed with the design approach of using the CIRIA Culvert Design and Operation Guide (C689). A further meeting was held with the Environment Agency on 05/09/18 during which details on the proposed bed levels and fish passage were discussed and agreed.</i> 4. <i>For Part B no specific meeting was held with the Environment Agency, and instead the Applicant adopted the same principles for Part B as there are only three watercourses here, which can accommodate a natural bed and all of which are culvert extensions.</i> 5. <i>The Applicant considers that the four broad principles outlined by the Environment Agency are not directly applicable to all the culverts impacted by the Scheme, for the reasons outlined below. This is because in a number of the watercourses there is insufficient water flow to support fish or other aquatic organisms for the majority of the year, these have been identified as ditches, it is these water features in which the applicant considers the four principles do not apply.</i> 6. <i>The inclusion or not of a natural bed within the new or extended culverts has taken many aspects into consideration, these include:</i> <ul style="list-style-type: none"> • <i>Carbon neutrality;</i> • <i>Potential for the natural bed to silt up;</i> • <i>Impacts on culvert size;</i> • <i>Construction impacts on the watercourses; and</i> • <i>Potential for changes in flow conveyance / flood risk.</i> 7. <i>The inclusion of a greater depth of natural bed than currently proposed would require a greater amount of embedded carbon as a result of a larger culvert. The larger culvert would result in greater</i>
--	--	---

		<p><i>bed and channel disturbance as a result of increased construction works. Full justification of this on a watercourse by watercourse approach is provided in the Culvert Mitigation Strategy [REP1-066], as revised and submitted as part of Deadline 5 [REP5-022].</i></p> <ol style="list-style-type: none"> 1. The Applicant therefore considers that the most appropriate depth of natural bed has been provided within the design, as previously agreed with the Environment Agency. Where a natural bed is not proposed, it is considered that any other aquatic organisms would be conveyed through the culverts in much the same manner as a relatively straight section of channel. 2. As detailed in the responses to Items 5, 8, 13 and 15 of this document, the Applicant considers that a comprehensive package of compensation measures is being provided. 3. As outlined in the response to Items 5 and 6 of this document, a watercourse specific mitigation and compensation plan will be submitted at Deadline 8.
30	The above comments are also applicable to 7.9.1.1 Culvert Mitigation Strategy - Rev 1 [REP5-022].	<ol style="list-style-type: none"> 1. This is a repeat of previous questions given the relationship between the Outline CEMP [REP6-025 and 026] (and as updated at Deadline 7) and the Culvert Mitigation Strategy [REP5-022] as detailed in the response to Item 1 of this document.
Specific comments on individual actions		
31	<p>Otters</p> <p>We welcome the inclusion of additional measures within the CEMP regarding otters. However, mitigation measures for commuting otters needs to be incorporated into the outline CEMP.</p>	<ol style="list-style-type: none"> 1. The response provided by the Environment Agency is understood by the Applicant to relate to Part B only. 2. As detailed in Appendix F Otter Position Statement [REP6-048], following ISH3, the Applicant held discussions with the Environment Agency on 23 and 30 April 2021 to explore the evidence for the presence of otter. Further possible evidence of otter adjacent to the study area for Part B was provided by the Environment Agency at the meeting on 30 April, and the Applicant is considering this and the potential need for fencing along Part B at key crossing locations. If taken forward, the fencing would be secured by amendment to the Outline CEMP.
32	<p>Action S-GS4</p> <p>This does not align with the updated measures in S-W1 in relation to the temporary surface water drainage strategy.</p>	<ol style="list-style-type: none"> 1. The Applicant considers that the Environment Agency have not fully realised that these two measures relate to different phases of the Scheme and therefore, there is no requirement for the two measures to align. 2. S-GS4 of the Outline CEMP [REP6-025 and 026] (submitted at Deadline 7) relates to the operational drainage scenario, whereas S-W1 relates to the surface water drainage strategy during construction. This strategy will be prepared by the Main contractor at the start of construction.
33	<p>Actions S-W1 or S-W8</p> <p>We would like to see reference made to the requirement to report any pollution incidents to the water environment to the EA's Pollution Incident Hotline (0800 80 70 60).</p>	<ol style="list-style-type: none"> 1. Detail added to measure S-W8 of the Outline CEMP [REP6-025 and 026] (updated and submitted at Deadline 7). The detail added states: 2. 'Should any pollution incidents to the water environment occur, they will be reported to the Environment Agency Pollution Incident Hotline (0800 80 70 60)'

34	<p>Action S-W1, (b),</p> <p>We welcome the statement to use seeded biodegradable fibre matting encourage re-vegetation of disturbed watercourse banks. This action should be updated to include a commitment to consider and use green (soft) and hybrid engineering solutions as alternatives to hard solutions for erosion control, scour management, wing walls etc.</p>	<p>1. Measure SW-1(b) of the Outline CEMP [REP6-025 and 026] has been updated to reflect this request for the Deadline 7 submission. This now states (with the new text underlined):</p> <p><i>1. The use of seeded biodegradable fibre matting to encourage re-vegetation after works on, or near, the banks, and consideration of the use of green (soft) and hybrid engineering solutions as alternatives to hard solutions for erosion control, scour management, and wing walls. This is applicable to the larger watercourses such as: The River Lyne, Fenrother Burn, Earsdon Burn, Longdike Burn and the River Coquet in relation to Part A, and Denwick Burn and its tributaries and Shipperton Burn in relation to Part B.</i></p>
35	<p>Action S-W6</p> <p>We welcome the commitment to the inclusion of gravel beds throughout the length of the new culverts. This commitment should be further strengthened to include minimum natural bed depths and minimum water depths (to support migratory fish species) for the new culverts. The Scottish Environmental Protection Agency's Good Practice guide for River Crossings provides a useful series of recommendations reflecting different sizes of culverts:</p> <ul style="list-style-type: none"> • For culverts less than 1.2 m diameter or height (internal height) the invert should be buried at least 15 cm below the natural bed level. • For culverts 1.2 - 1.8 m diameter or height (internal height) the invert should be buried at least 20 cm below the natural bed level. • For culverts greater than 1.8 m diameter or height (internal height) the invert should be buried at least 30 cm below the natural bed level. <p>CIRIA's Culvert, Screen and Outfall Manual is slightly more rigid and states that the depth of a natural bed is between 300-600mm.</p>	<p>1. As discussed in the response to Item 29, the Applicant considers that the depth of the natural beds has been designed in line with the appropriate guidance, as detailed in the Applicants Response to Deadline 5 submissions in Table 1-1, Item 18 at Deadline 6 [REP6-040].</p>
36		
37	<p>We welcome the inclusion of a hydromorphologist for the detailed design of the culverts. However, table 2.1 (environmental consultant – designer) implies a generalist role. This table should be updated to reflect the use of a hydromorphologist.</p>	<p>1. Table 2-1 of the Outline CEMP [REP6-025 and 026] has been updated at Deadline 7 with a new row which outlines the role of the hydromorphologist. S-W6 of the Outline CEMP [REP6-025 and 026] has been updated at Deadline 7 to reference the amended Table 2-1.</p>
38	<p>Action B-B5 a) and b)</p> <p>We welcome the commitments outlined in Action B-B5 a) and b).</p>	<p>1. The Applicant notes the Environment Agency's position.</p>
39	<p>A-B7 and A-W7</p> <p>The design of the new channel should be based around the predicated discharges rather than existing conditions. In accordance with paragraphs 5.23 and 5.33 of the National Policy Statement for National Networks (2014), the design objectives should maximise the opportunities presented through the design of the new channel. The aim, as far as possible, accepting the local constraints, should be to re-establish the natural functioning of the channel, through naturalised flows, sediment transfer, patterns of erosion and deposition. Measures such as these will provide the most sustainable long term solutions delivering multiple benefits including climate resilience, sustainable flood management, improved biodiversity, reduced maintenance costs.</p>	<p>1. It is assumed that by predicated discharges the Environment Agency mean the predicted future design flows (which in this instance is frequently taken to be the 1 in 100 year plus an allowance for climate change).</p> <p>2. The Applicant does not agree that the channel should be designed around the future design flows as this could result in a change to the flood regime. Notwithstanding this consideration will be given to the potential to contain the flood flows within the channel during detailed design. This is secured via changes in wording of the Outline CEMP for both A-B7 and A-W7 of the Outline CEMP [REP6-025 and 026] (updated and submitted at Deadline 7).</p> <p>While A-B7 of the Outline CEMP [REP6-025 and 026] (updated and submitted at Deadline 7) covers the design of all the impacted watercourses across Part A, A-W7</p>

		relates to the tributary of the Fenrother Burn. The Fenrother Burn is a field boundary ditch and is not considered to be a watercourse as set out in Annex A - Approach to the Assessment of Losses and Gains of Watercourses [REP2-010], as such there is no natural functioning of this watercourse to reinstate.
40	A-W2 Given the nature of the upstream catchment and the size of the culverts under the A1 (900mm diameter), the proposed culverts appear significantly over sized. Consideration should be given to downsizing these 2 culverts and reducing the depth of any natural bed to 150mm. This would reduce the scheme's carbon footprint.	1. A-W2 of the Outline CEMP [REP6-025 and 026] (updated and submitted at Deadline 7) relates to the Cotting Burn Culvert only (ref 1.4) for which a rectangular culvert has been incorporated within the design. This is the smallest standard precast RC unit which can be used to meet the required performance criteria (flow conveyance and freeflow). The design of this culvert must also withstand the surcharge loading with a shallow depth of cover. Alternative piped solutions were considered using precast RC and High Density Polyethylene (HDPE) however this would require multiple pipes with a mass or reinforced concrete surround thus increasing the embodied carbon and introducing a larger length of culverted watercourse.
41	A-W6 (Priest's Bridge Culvert) There is insufficient information to determine whether the design of this culvert is appropriate to address the ecological requirements of the River Lyne. The River Lyne is morphologically active with sufficient energy for natural adjustment, localised sinuosity and bank erosion and sediment deposition processes operating.	1. The Environment Agency have not provided sufficient information to enable the Applicant to address their overall concerns, however, specific points are discussed in items 42 and 43 below. This will be discussed during the meeting scheduled with the Applicant and the Environment Agency on 18 May 2021, with further detail provided at Deadline 8.
42	The existing culvert appears to be hindrance to fish passage due to the wide shallow flat bed which will promote high flow velocities. The inclusion of baffles within this structure is welcomed, and will help mitigate the fish passage issues associated with this structure.	1. The Applicant notes the Environment Agency's agreement that the retrospective installation of fish baffles within the existing culvert of the River Lyne (not impacted by the Scheme) will help improve fish passage issues associated with the structure. The velocities in the culvert for Q100+CC = 1.29m/s, Low flows Q10 = 0.87m/s and Q90 = 0.346m/s. This information was provided to the EA during consultation. A wide invert would reduce velocities rather than increase them due to an increase in the wetted perimeter, this will aid the fish passage.

<p>43</p>	<p>The inclusion of a low flow channel within the proposed culvert is supported. However, it needs to be designed to enable fish to pass. The table below is an extract from CIRIA's Culvert, Screen and Outfall Manual and provides design criteria for flow velocities and water depths through culverts.</p> <p>Table 9.3 - CIRIA's Culvert, Screen and Outfall Manual</p> <p>Table 9.3 Design criteria for culverts to enable fish to pass (from Armstrong et al, 2016)</p> <table border="1" data-bbox="326 483 1662 976"> <thead> <tr> <th colspan="2">Parameter</th> <th>Coarse fish roach, dace, chub etc smaller than 250 mm</th> <th>Brown trout and coarse fish up to 250 mm and large coarse fish 250 - 500 mm</th> <th>Sea trout, brown trout up to 250 - 500 mm and larger coarse fish greater than 500 mm</th> <th>Salmon and large sea trout greater than 500 mm</th> </tr> </thead> <tbody> <tr> <td rowspan="3">Maximum flow velocity through the culvert (m/s) ^(a, b, c)</td> <td>Length <20 m</td> <td>1.1 m/s</td> <td>1.25 m/s</td> <td>1.6 m/s</td> <td>2.5 m/s</td> </tr> <tr> <td>Length 20 m to 30 m</td> <td>0.8 m/s</td> <td>1.0 m/s</td> <td>1.5 m/s</td> <td>2.0 m/s</td> </tr> <tr> <td>Length >30 m</td> <td>0.5 m/s</td> <td>0.8 m/s</td> <td>1.25 m/s</td> <td>1.75 m/s</td> </tr> <tr> <td colspan="2">Minimum water depth in culvert ^(d)</td> <td>100 mm</td> <td>100 mm</td> <td>150 mm</td> <td>300 mm</td> </tr> <tr> <td colspan="2">Maximum water level drop at outlet ^(e)</td> <td>100 mm</td> <td>200 mm</td> <td>300 mm</td> <td>300 mm</td> </tr> <tr> <td colspan="2">Minimum gap between screen bars</td> <td>100 mm</td> <td>100 mm trout 150 mm coarse fish</td> <td>150 mm</td> <td>200 mm</td> </tr> </tbody> </table> <p>Notes</p> <p>a Mean velocity of cross-section (there will be areas of lower and higher velocity).</p> <p>b The velocities for the shorter culverts approximate to the burst speed achievable by each species at 5°C, and the velocities for culverts > 30 m approximate to the cruising speed.</p> <p>c These velocities should not be exceeded at any flow within the passage design flow range.</p> <p>d Minimum depth acceptable at the lower end of the passage design flow range.</p> <p>This would mean an average maximum flow velocity of 0.8 m/s during the passage design flow range, with a minimum of depth of 100-150mm. Given the length of the culvert, and that the River Lyne is morphologically activity, we recommend a minimum natural bed depth of 300mm within the low flow channel.</p>	Parameter		Coarse fish roach, dace, chub etc smaller than 250 mm	Brown trout and coarse fish up to 250 mm and large coarse fish 250 - 500 mm	Sea trout, brown trout up to 250 - 500 mm and larger coarse fish greater than 500 mm	Salmon and large sea trout greater than 500 mm	Maximum flow velocity through the culvert (m/s) ^(a, b, c)	Length <20 m	1.1 m/s	1.25 m/s	1.6 m/s	2.5 m/s	Length 20 m to 30 m	0.8 m/s	1.0 m/s	1.5 m/s	2.0 m/s	Length >30 m	0.5 m/s	0.8 m/s	1.25 m/s	1.75 m/s	Minimum water depth in culvert ^(d)		100 mm	100 mm	150 mm	300 mm	Maximum water level drop at outlet ^(e)		100 mm	200 mm	300 mm	300 mm	Minimum gap between screen bars		100 mm	100 mm trout 150 mm coarse fish	150 mm	200 mm	<ol style="list-style-type: none"> 1. As discussed in Item 29 of this document, the depth of natural bed included within each culvert as been determined in accordance with the best practise available at the time of the design. The low flow channel within this culvert (Priest's Bridge Culvert) has been designed to have 200mm of natural bed, with the natural bed depths beyond this being between 250-300mm. The Structures and Engineering Drawings and Sections [REP5-004] will be updated at Deadline 8 to reflect this design. 2. This demonstrates that for the small frequent events (i.e. less than 1 in 10 years) the culvert will remain passable for brown trout and coarse fish (or larger species), for larger flow events, the fish would not be able to pass upstream for the relatively short duration of the peak of the hydrograph.
Parameter		Coarse fish roach, dace, chub etc smaller than 250 mm	Brown trout and coarse fish up to 250 mm and large coarse fish 250 - 500 mm	Sea trout, brown trout up to 250 - 500 mm and larger coarse fish greater than 500 mm	Salmon and large sea trout greater than 500 mm																																					
Maximum flow velocity through the culvert (m/s) ^(a, b, c)	Length <20 m	1.1 m/s	1.25 m/s	1.6 m/s	2.5 m/s																																					
	Length 20 m to 30 m	0.8 m/s	1.0 m/s	1.5 m/s	2.0 m/s																																					
	Length >30 m	0.5 m/s	0.8 m/s	1.25 m/s	1.75 m/s																																					
Minimum water depth in culvert ^(d)		100 mm	100 mm	150 mm	300 mm																																					
Maximum water level drop at outlet ^(e)		100 mm	200 mm	300 mm	300 mm																																					
Minimum gap between screen bars		100 mm	100 mm trout 150 mm coarse fish	150 mm	200 mm																																					
<p>46</p>	<p>A-W7 (Fenrother Burn)</p> <p>The design of the new channel should be based around the predicated discharges rather than existing conditions. The design objectives should maximise the ecological opportunities presented through the design of the new channel. The aim, as far as possible, accepting the local constraints, should be to re-establish the natural functioning of the channel, through naturalised flows, sediment transfer, patterns of erosion and deposition. Measures such as these will provide the most sustainable long term solutions delivering multiple benefits including climate resilience, sustainable flood management, improved biodiversity, reduced maintenance costs.</p>	<ol style="list-style-type: none"> 1. This comment is repeated above. A response is provided against Item 39 of this document. 2. The Scheme requires the re-alignment of tributaries of the Fenrother Burn, not the main channel, as inferred by the Environment Agency. Instead, these tributaries are essentially relatively straight uniform, ephemeral (i.e. non permanently flowing) field boundary ditches and are not designed as watercourses in Annex A - Approach to the Assessment of Losses and Gains of Watercourses [REP2-010]. 3. The Applicant considers that these channels are being recreated in a better form than their current status and further enhancements are not necessary to a field boundary ditch. 4. Furthermore, returning a field boundary ditch to a natural state (i.e. before they were created to artificially improve the land drainage) would not be practical or desirable. 																																								

		<p>5. The Scheme has a complex and numerous set of constraints, which have been worked through by the multidisciplinary design team to ensure that every opportunity is sought to improve the water environment and habitat, whilst balancing the impacts on the adjacent landowners and their associated uses.</p>
47	<p>A-W8 (North and South Fenrother Burn)</p> <p>Given the nature of the upstream catchment and the size of the existing culvert under the A1 (500mm diameter), the proposed culverts appear significantly over sized (1.5x1.25m twin box and 3x1.75m box). Could these 2 culverts be downsized given the limited scope for fish to be present the depth of any natural bed could be reduced to 150mm?</p>	<p>1. The response refers to structure references used within The Culvert Mitigation Strategy [REP5-022] and the Structures and Engineering Drawings and Sections [REP5-004].</p> <p>Rectangular culverts have been incorporated within the design due to a shallow (structure reference 5.2) or significant (structure reference 5.3) depth of cover which would lead to uneven loading on the culvert from the surround. The size proposed is the smallest standard precast RC unit which can be used to meet the required performance criteria (flow conveyance and freeflow). The design of this culvert must also withstand the surcharge loading. Alternative piped solutions were considered using precast RC and High Density Polyethylene (HDPE) however this would require multiple pipes with a mass or reinforced concrete surround thus increasing the embodied carbon and introducing a larger length of culverted watercourse.</p>
48	<p>A-W9 (Causey Park Culvert)</p> <p>The photographs of the burn suggest flows sufficient to support fish, while the planform upstream and downstream of Causey Park suggest a morphologically active channel with sufficient energy for natural adjustment, localised sinuosity. We recommend the inclusion of a low flow channel within the culvert designed using the principles outlined for A-W6.</p>	<p>The aquatic habitat assessment undertaken for Earsdon Burn determined that the watercourse was unsuitable for fish surveys, and therefore unlikely to support fish (Appendix 9.3 Aquatic Ecology Survey Report Part A [APP-229]) and therefore, there is no requirement for a low flow channel to aid fish passage.</p>
49	<p>A-W10 (New Houses Farm Culvert)</p> <p>This action refers to the re-aligned channel and not the culverts. It needs to be re-worded to reflect this. Design principle for the new channel should align with principles outlined in A-W7 and A-B7. Given the Applicant's ambition to reduce the levels of embedded carbon, consideration should be given to the use of alternative materials such as polyethylene (high density) [HDPE] for this structures.</p>	<p>1. The wording has been updated within the Outline CEMP [REP6-025 and 026] submitted at Deadline 7 to reflect that this applies to the realigned channel of the Tributary of Earsdon Burn and not the culverts.</p> <p>2. The Applicant does not agree that the channel should be designed around the predicted discharges as this could result in a change to the flood regime. Notwithstanding this, consideration will be given to the potential to contain the flood flows within the channel during detailed design. This is secured via changes in wording of A-W10 in the Outline CEMP [REP6-025 and 026] (updated and submitted at Deadline 7).</p> <p>3. A precast concrete pipe has been specified in this location as this culvert conveys flows beneath a landform resulting in a significant depth of cover and surcharge loading from farm traffic. An alternative HDPE culvert a was considered but discounted due to anticipated ovalisation and deformation due to surcharge.</p>
50	<p>A-W12 (Earsdon Burn culvert)</p> <p>Given that this culvert is on a farm access track, it is unclear why the additional cost of a mammal ledge is considered necessary for this structure.</p>	<p>As advised by the Environment Agency early on in the design process (within an email dated 14 June 2018), "<i>mammal passage and mitigation should be considered for all culverts and watercourses...</i>" The Applicant acknowledges that Earsdon Burn Culvert is located beneath a new access track and therefore the risk to otter as a result of vehicle collision on the track is significant reduced. However, given the proximity of Earsdon Burn Culvert to the Causey Park Culvert to the northwest, which passes beneath the new offline section of Part A, it was considered appropriate and beneficial to facilitate mammal passage through both culverts to maintain movement corridors beneath roads (either the farm track or A1).</p>

51	This action also refers to comments made for A-W9. Unless the Applicant believes that a smaller culvert can be used as this structure is upstream of the New Houses Farm tributary, we recommend that this action is renumbered A-W11 to reflect the south to north trend.	The Applicant has renumbered A-W11 and A-W12 in the Outline CEMP [REP-025 and 026] (as updated at Deadline 7) to ensure ease of reading and interpretation by all parties during the next phases of the Scheme as suggested by the Environment Agency.
52	A-W11 (Bockenfield Bridge/Culvert) We require justification for the need of scour protection, whether it can be designed out, and whether green or hybrid solutions can be used as an alternative to a hard engineered solution.	1. The Applicant considers that this is a detailed design issue and is now suitably secured via the update to S-W1, (b) of the Outline CEMP [REP6-025 and 026] (updated and submitted at Deadline 7) as discussed in Item 34 of this document.
53	It is unclear why the mitigation measures for the Burgham Culvert and the proposals for the riparian improvements to the Longdike are not included in the outline CEMP. For the Burgham Culvert it is recommended that an option to raise water levels above the lip of the downstream culvert are also included in the package of works to improve fish access. This will benefit species such as eel and lamprey, will broaden the window when migration is possible, and will be a more robust and long term solution.	<ol style="list-style-type: none"> 1. The measures for the Longdike Burn are included in the Outline CEMP [REP6-025 and 026] (updated and submitted at Deadline 7) under A-B40 as identified by the Environment Agency in Item 55 below. Further detail will be added to the Outline CEMP following the conclusion of the discussion over the design for this watercourse with the Environment Agency, likely to be at Deadline 8, following the meeting on 18 May 2021. 2. The only changes to the Burgham Culvert (10.1) are modifications to existing headwalls. The length of the culvert and its permeability to fish passage will not be adversely impacted by the Scheme. As such, no mitigation measures are required. The existing (unchanged) culvert outlet cannot be lowered to align with channel bed due to extent of engineering works that would be required. An improvement for fish passage is proposed within the culvert, by the replacement of the existing wooden baffles with more permanent structures to improve the lifespan of the feature and maintain fish passage in the long-term (longer lasting material). This improvement is secured by measure A-B9 of the Outline CEMP [REP6-025 and 026] (and as updated at Deadline 7).
54	A-B30 This needs to be amended to reflect the comments made above.	<ol style="list-style-type: none"> 1. As discussed in the response to Item 29, the Applicant considers that the depth of the natural beds has been designed in line with the appropriate guidance, as detailed in the Applicants Response to Deadline 5 submissions in Table 1-1, Item 18 at Deadline 6 [REP6-040]. Therefore, there is no requirement to change this measure, which details the depth of natural bed which is to be provided in the culverts. 2. With regard to the natural beds within the culverts the Applicant is currently considering the feasibility of incorporating a greater depth of natural beds within the culverts.
55	Actions A-B40 This refers to compensation due to the direct loss of ~35m of the Longdike Burn due to the Bockenfield Culvert (12) extension. It is understood that improvements will be delivered on a ~850m section of the Longdike Burn within the DCO boundary. Although we welcome compensation for the direct loss of ~35m of watercourse we request further details on this proposal.	1. As detailed in the response to Item 8 above, the Applicant submitted information on the proposals for Longdike Burn at Deadline 6 in Item 38 of Table 1-1 of the Applicant's Response to Deadline 5 and 5a Submissions [REP6-040] which is supported by Appendix iii – Indicative Longdike Burn Proposals [REP6-042] and remains in discussions with the Environment Agency on this aspect, with a further meeting scheduled for 18 May 2021.
56	Improvements are described as 'nutrient management measures to address adverse impacts of run-off from agricultural land, aquatic planting and bankside stabilisation'. Can the Applicant demonstrate that nutrients from agricultural land are impacting the Longdike Burn at the proposed improvement site? Is there an identified source and point of entry to the watercourse that needs to be addressed? What forms of	1. As detailed in the response to Item 8 above, the Applicant submitted information on the proposals for Longdike Burn at Deadline 6 in Item 38 of Table 1-1 of the Applicant's Response to Deadline 5 and 5a Submissions [REP6-040] which is supported by Appendix iii – Indicative Longdike Burn Proposals [REP6-042] and remains in

	<p>bank stabilisation activities are proposed? It is our understanding that further evidence and clarification regarding the on Longdike Burn will be submitted at Deadline 7.</p>	<p>discussions with the Environment Agency on this aspect, with a further meeting scheduled for 18 May 2021.</p> <p>2. The measures currently proposed along Longdike Burn do not include nutrient management or bank stabilisation measures but include:</p> <ul style="list-style-type: none"> • Riparian woodland planting (subject to detailed design this could include native tree species) • Enhancements to an existing berm with suitable planting particularly wetland tolerant / amphibious vegetation. • Aquatic macrophyte planting to compliment the riparian planting and enhancements to the berm feature. • Understorey planting (this may be beneficial along other parts of the reach) this could include amphibious or reeds or rushes.
<p>Deadline 5 Submission - 7.22 Applicant's Response to Deadline 4 Submissions [REP5-029]</p>		
57	<p>Ref. No. 1</p> <p>Phase 1 habitat codes are not used when using the Defra Biodiversity Metric as they require UK Habitat Classification, meaning that the Phase 1 for Dry Ditch must have been converted into a UK Habitat Classification code. The UK Habitat Classification does not have a code / habitat type for Dry Ditch. It is also noted that table 2-2 – Corresponding JNCC Phase 1 Habitat and UK Habitat Classifications within 6.28 Biodiversity No Net Loss Assessment for the Scheme (Clean) for Change Request [REP5-038] omits this detail. We would welcome clarity of what was used for the calculations and if the value as a linear feature has been captured.</p>	<p>1. This comment is repeated above. A response is provided against Item 4 of this document.</p>
58	<p>Ref. No 2</p> <p>Woodland planting along watercourses should only be recognised as compensation for the loss of watercourse and riparian habitat if it is appropriate compensation.</p> <p>Due to the limitations of the DCO boundary, it is unclear what the benefits of tree planting along watercourses within the DCO would deliver. Therefore, consideration should be given to the inclusion of compensation being delivered outside the DCO boundary. This would enable suitable and potential compensation for the loss of watercourse to be delivered. This is also in accordance with paragraph 5.25 of the National Policy Statement for National Networks.</p>	<p>1. The Applicant considers that riparian planting is appropriate for this scheme. This is a repeat of submissions contained in items 5, 8, 13 and 15 of this document.</p>
59	<p>According to the current package of compensatory works detailed within 7.9.1.1 Culvert Mitigation Strategy - Rev 1 [REP5-022], a total of 1240m of riparian planting is included to compensate for the loss of 427m of watercourse. The figure of 427m only captures the length of the culvert, and does not take into account the easement either side of the new or extended bridges that will require being cleared of all vegetation and possibly any bank features to allow construction to take place. As such, on watercourses such as Floodgate Burn or the River Lyne where substantial riparian woodland already exists, the loss and impact is not clearly represented and is expected to be much larger than 427m. Furthermore, much of the claimed riparian planting is either where existing riparian woodland already exists on these burns and as such, it is unclear how much of the 1240m is to replace what is to be lost due to the scheme and what is compensatory.</p>	<p>1. This comment is repeated above. A response is provided against Items 5 and 6 of this document. Noting that a set of plans demonstrating how the riparian planting contributes to the compensation for the loss of channel will be submitted at Deadline 8.</p>
60	<p>The Applicant must clearly demonstrate not only the loss of watercourse due to culverting, but also the length of existing riparian habitat lost to ensure it is clear where the riparian planting is compensation for loss of existing riparian, or compensation for the loss of watercourses through culverting. It is also worth</p>	<p>1. This comment is repeated above. A response is provided against Items 5 and 6 of this document. Noting that a set of plans demonstrating how</p>

	noting that any replaced habitat is often provided at a greater than 1:1 ratio to account for the impacts of the scheme and the time taken for the habitat to reach the same biodiversity value as what has been lost.	the riparian planting contributes to the compensation for the loss of channel will be submitted at Deadline 8.
61	As outlined in .9.1.1 Culvert Mitigation Strategy - Rev 1 [REP5-022], the Applicant is proposing 500m of riparian planting along Longdike Burn where a varying low to medium density riparian woodland already exists. Additional planting may provide lower than stated uplifts if the existing scrub and tree have not been accounted for. Alternatively, the site would likely naturally regenerate given the existing scrub and woodland if grazing pressures are removed from the site. Natural regeneration can often result in greater biodiversity and resilient woodlands due to the growth of locally native trees from the seedbank. As such, focus on compensation in areas where an existing seed source is not present would likely yield a greater contribution to the impacted watercourse.	<p>1. This comment is repeated above. A response is provided against Item 8 of this document.</p> <p>It is understood that concerns regarding grazing relate to deer as opposed to livestock. It is considered that it is beyond the requirements for the Scheme to prevent deer from accessing this parcel of land. Nevertheless, industry recognised best practice measures can be put in place to reduce the impact of deer grazing young planting, and suitable tree protection will be specified at detailed design stage where it is known that deer are potentially an issue. Suitable tree protection may include tree guards of a minimum height of 1.5m for roe deer and 1.8m for fallow deer (both species present within desk study data obtained by the Applicant). As industry recognised best practice measures, these would be identified and detailed within a Series 3000 specification document, which is secured by measures S-L11 and S-L13 of the Outline CEMP [REP6-025 and 026] (and as updated at Deadline 7</p>
62	The Applicant is suggesting to undertake 'nutrient management measures, aquatic planting and bankside stabilisation' on Longdike Burn. We have still not yet been presented with any justification for the suitability of these works and are concerned that this may be claimed as compensation without any evidence that these issues are present within the proposed area or are in fact causing a degradation of the watercourse. We believe further details are to be submitted at Deadline 7.	1. This comment is repeated above. A response is provided against Item 8 of this document.
63	We would welcome further information regarding how these areas are to be maintained and protected once returned to landowners. Future use of these compensation areas may severely impact their potential to recover, provide value to biodiversity and result in a no net loss in biodiversity in the long term as a result on the scheme.	1. All watercourse compensation areas are within the DCO permanent acquisition boundaries, this will be demonstrated clearly through the set of plans being prepared for submission at Deadline 8 as discussed against items 5 and 6 of this document.
64	With respect to point 1 of the Applicant's response, it states that 'Additional improvement measures identified that collectively form the current package of compensatory works include design of realigned watercourse channels (138m, Part A) to be better (in terms of environmental condition and biodiversity value) than that lost'. We would welcome clarification as to how the delivery of improvement measures to a section of watercourse that is to be realigned as part of the scheme can be classed as compensation?	1. This comment is repeated above. A response is provided against Item 9 of this document.
65	With respect to point 4 of the Applicant's response, it states that the Applicant 'is exploring opportunities to improve lengths of other existing watercourses that fall within the Order limits to further compensate for the loss of watercourse channel. This may involve the re-naturalising and re-meandering of historically heavily modified and straightened channels'. We are pleased to see the Applicant has taken on-board our suggestions of improving historically heavily modified and straightened channels. However, we have not yet been presented with such measures and potential opportunities.	As detailed in response 15 above, the position of the Applicant is that sufficient measures have been identified to mitigate and/or offset the assessed impacts, although the Environment Agency disagree. However, the Applicant continues to explore the feasibility of further improvements of existing watercourses within the Order limits. The Applicant remains in discussion with the Environment Agency regarding this matter, which is to be discussed in greater detail during a meeting scheduled for 18 May 2021. A record of discussions and progress will be captured within the statement of common ground for issue at Deadline 8.
66	Ref. No. 3 We hold data that shows 3 records of otter within 2km within the last 10 years (2015, 2016 and 2017). One record is on the River Aln so there is potential for otters to migrate up White House Burn where there appears to be some ponds (and as such a potential feeding location). The second record is on Kittycarter Burn downstream of the scheme towards Fallondon. The first record is c.1km from the A1	<p>1. These responses are an expansion of responses 10 and 11 above.</p> <p>2. As detailed in recent written representations (Applicant's Response to Deadline 4 Submissions [REP5-029]), the most recent otter record within the dataset obtained by the Applicant for Part B (2km search area from Order limits) dates back to 2015, located 1km from Part B. As</p>

	within a small pond near lime kilns on Rock Estate. However there appears to be no direct link with the A1.	
67	Considering there are historical records of road mortalities on the A1 (6 records 2001-2009, 5 on the A1 2001-2008), this indicates that the existing scheme has already acted as a barrier to movement and caused harm to otters.	
68	On 29/04/21 the EA undertook a site visit to Shipperton Burn in Part B of the scheme. An abundance of otter spraints were found both upstream and downstream of the structure, indicating the burn is actively used by otters. In total 6 sprainting locations were found within 200m of the scheme, with the closest c.10m upstream from the road boundary. We have provided the Applicant with this evidence.	<p>detailed in the Applicant's Written Summaries of Oral Submissions to Hearings issued at Deadline 6 [REP6-044], the records from 2016 and 2017 for Part B referred to by the Environment Agency were not present within the Applicant's data set. However, following further discussion with the Environment Agency, the Applicant acknowledges the two otter records from 2016 and 2017, which are located close to the 2km search area from Part B.</p> <ol style="list-style-type: none"> Following Issue Specific Hearing 3, the Applicant held discussions with the Environment Agency on 23 and 30 April 2021 to explore the evidence for the presence of otter. Further evidence of otter adjacent to the study area for Part B (along Shipperton Burn) was provided by the Environment Agency at the meeting on 30 April, and the Applicant is considering this and the potential need for fencing along Part B at key crossing locations. The Applicant is considering fencing at four locations along Part B. The Applicant is actively engaging with the Environment Agency on this matter and is making progress to seek a resolution. Further discussions will be captured within the statement of common ground.
69	The burn provided good habitat for otters. However, the culvert is a fully concrete structure with a smooth base with a relatively steep incline and as a result, water velocities were relatively high. As such, it is anticipated that given the uniform and smooth channel base, in high flows the culvert would be impassable to otter. In light of the clear evidence of use by otters and poorly designed culvert, we request that the Applicant takes into account this new evidence and reevaluates their assessment for otters in Part B, specifically the risks posed by the Shipperton Burn culvert.	<ol style="list-style-type: none"> As detailed above, following Issue Specific Hearing 3, the Applicant held discussions with the Environment Agency on 23 and 30 April 2021 to explore the evidence for the presence of otter on Part B. Further evidence of otter adjacent to the study area for Part B (along Shipperton Burn) was provided by the Environment Agency at the meeting on 30 April, and the Applicant is considering this and the potential need for fencing along Part B at key crossing locations. The Shipperton Burn Culvert would be extended as part of the construction of Part B, with the extension being a mirrored design of the existing culvert. The Applicant has explored the feasibility of retrofitting a mammal shelf into the Shipperton Burn Culvert (including within the extension). Whilst it is feasible to consider a shelf in the extension, should a precast culvert design be used, the culvert dimensions (1.2m height by 2.0m width) prevent the retrospective installation of a mammal shelf within the existing culvert. This is not possible due to the lack of physical space for a person to install the shelf and also for the lack of physical space for the shelf and allowance of headroom. Further, the Applicant's engineers confirm that, as designers, under Construction (Design and Management) (CDM) Regulations, there is a duty to eliminate hazards and reduce risks. In this case the confined space hazard can be avoided by not entering the culvert. The Applicant is actively engaging with the Environment Agency on this matter and is making progress to seek a resolution. Further discussions will be captured within the statement of common ground.
70	Barriers to movement have the potential to impact upon connectivity of habitats and important ecological features which play a key functional role in the landscape as 'stepping stones' for migratory species to move during their annual migration cycle. It also helps species to move between sites, to disperse populations to new locations, to forage, or move in response to climate change. If no action is taken and the Shipperton Burn culvert is extended in its current form, then the scheme poses a risk of increasing	<ol style="list-style-type: none"> As presented within the Applicant's Response to Deadline 4 submissions [REP5-029], it was discussed with the Environment Agency during a meeting held on 11 March 2021, that it is not feasible, proportionate or pragmatic to remove all extant culverts and upgrade them. The increased construction footprint requirement and damage to

	otter mortalities given otters may be less likely to use longer culvert or are unable to pass through in high flow.	<p>existing habitats, both terrestrial and aquatic, that would be required to facilitate this, outweigh the benefits of this approach (as per A.23 of the Applicant's Response to the Environment Agency's Relevant Representation [REP1-064]). The Environment Agency acknowledged this during the meeting. Structures are to be extended consistent with those currently present (in relation to form and dimension) and following extension, culverts will remain suitable for use by mammals for passage beneath the carriageway.</p> <p>2. Details of evidence of otter presence and activity (along the Shipperton Burn) were provided by the Environment Agency to the Applicant during a meeting on the 30 April 2021. The Applicant is considering this and the potential need for fencing along Part B at key crossing locations, including the Shipperton Burn. The Applicant continues to discuss this matter with the Environment Agency to seek a resolution.</p>
71	Consequently, otters may be forced to travel over the road where they are more likely to be killed on the road as they will need to cross 4 lanes instead of 2 lanes.	
72	In response to the Applicant's response (point 4), we welcome the additional measures. However, this is highly reactive to the death of a European protected species and does not apply the precautionary principle given the records and evidence presented. Any retrospective mitigation measures may either be prohibited by access issues, due to landscaping and riparian planting either being physically in the way or the damage access would cause, or unreasonable costs post scheme completion for retrofit.	1. This comment is repeated above. A response is provided against Item 12 of this document.
73	Ref. No 4, point 3 We do not agree that the proposed level of compensation is adequate for the loss of or damage to watercourse and riparian habitat that will be realised due to the delivery of the scheme.	1. This comment is repeated above. A response is provided against Item 13 of this document.
74	Ref.No4a We welcome the provision of further details regarding the proposed improvements to the Longdike Burn at Deadline 7.	1. This comment is repeated above. A response is provided against Item 8 of this document.
75	Ref.No.6 The figure presented for the loss of watercourse is 427m. However, we are unclear if this simply relates to the length of the culvert, or the headwalls and other physical modifications that result in the loss of natural bank / riparian vegetation removal.	1. This comment is repeated above. A response is provided against Item 15 of this document.
76	The 'creation' of a watercourse to facilitate the diversions would need to align with best practice and protected from livestock during recovery to replace lost watercourses with natural banks and diversity. Given any new watercourse or channel will take a number of years to establish and recover, simply deducting the new channel length from the lengths lost does not accurately account for the impacts of the scheme in the short term. Hence why compensation is often required at multiples of those lost to account for this. Where tree planting is often replaced at a ratio of at least 3:1 to account for unsuccessful establishment, and to counter the short term loss of overall biomass and biodiversity value, watercourses here are simply being replaced at a 1:1 ratio based only on the length of the culvert and not the other construction features associated with such strictures.	<p>1. There is no need to protect the constructed watercourses from livestock as all watercourse compensation areas are within the DCO permanent acquisition boundaries and there are no proposals to utilise this land for livestock grazing. This will be demonstrated clearly through the set of plans being prepared for submission at Deadline 8 as discussed against items 5 and 6 of this document.</p> <p>2. Appropriate management will be in place. This will be set out in the LEMP, which is secured within ExA: S-L100 of the Outline CEMP [REP6-025 and 026] (and updated at Deadline 7), and this will then be adopted into the HEMP,</p> <p>3. The EA's comment on the compensation package (watercourses being replaced at a 1:1 ratio) is repeated above. A response is provided against Items 5, 8, 13 and 15 of this document.</p>

77	We see no commitment within section 5.1. 'Post construction monitoring' to monitor the watercourses post construction and rectify any defects or intervene where they have not achieved the value or diversity as per the designs.	1. This is secured by EXA:- S-W102 of the updated Outline CEMP [REP6-025 and 026] (updated and submitted at Deadline 7).
78	Ref. No50 We do not agree that the 'retrospective installation of fish baffles on the existing culvert of the River Lyne (Part A), replacement of the wooden baffles within an existing culvert of Longdike Burn (Part A)' constitutes as compensation for the loss of watercourse and riparian habitat that will be realised by this scheme. It is a legal obligation to maintain fish passage under the Salmon and Fresh water fisheries Act.	1. This comment is repeated above. A response is provided against Item 16 of this document.
Deadline 5 Submission - 7.21 Applicant's Response to ExA's Further Written Questions [REP5-023]		
79	With respect to geomorphology, the Slope Stability and Southern Access works have the potential to have a locally significant impact on the River Coquet. The temporary river training works and the scour protection/rock armour will lead to the loss riparian habitat, will fix the river to the currant planform, and will change local flow regimes and sediment dynamics. The work will also decouple to the river from the surrounding slopes, and the sediment they supply, and it is likely that the changes to the channel dynamics extend beyond the footprint of the scheme.	<ol style="list-style-type: none"> 1. As set out in response 17, the Applicant disagrees that the slope stabilisation and southern access works have the potential to have a locally significant impact on the River Coquet with respect to geomorphology. The Applicant sets out the criteria for determining the magnitude of impact in Table 9-2 and Table 8-2 of Environmental Statement Addendum: Stabilisation Works for Change Request [REP4-063] and Environmental Statement Addendum: Southern Access Works for Change Request [REP4-064] respectively, which has been adapted from Table 5-2 of Appendix 10.7 Geomorphology Assessment – River Coquet Parameter 10 Part A of the ES [APP-260]. When assessing the proposed works, it was determined that the magnitude of impact on geomorphology is considered to be of minor adverse magnitude, as a result of the localised nature and limited extent of any changes. 2. The Applicant does however agree that the slope stabilisation and southern access works would result in a significant effect with respect to the River Coquet and Coquet Valley SSSI. The loss of riverbank habitat is unlikely to affect the integrity of the River Coquet and Coquet Valley SSSI or its ecological function, due to the short length of bank habitat affected (in comparison to the scale of the wider SSSI unit) and the predicted minor adverse impacts to geomorphology (Table 9-8, Environmental Statement Addendum: Stabilisation Works for Change Request [REP4-063] and Table 8-8, Environmental Statement Addendum: Southern Access Works for Change Request [REP4-064]). However, the loss of riverbank habitat is concluded to result in a significant effect (direct, permanent Moderate adverse effect) to the SSSI (paragraph 8.10.6, Environmental Statement Addendum: Stabilisation Works for Change Request [REP4-063] and paragraph 7.10.6, Environmental Statement Addendum: Southern Access Works for Change Request [REP4-064]). 3. As noted in Table 9-7 of Environmental Statement Addendum: Stabilisation Works for Change Request [REP4-063] and Table 8-7 of Environmental Statement Addendum: Southern Access Works for Change Request [REP4-064], construction of the temporary river training works could create a short-term increase in the volume of fine sediment directly entering the channel and consequently increase turbidity. The restriction of flow and reduced channel width at all flows may alter the sediment transport capability of the river, enabling the

		<p>transport of larger material at lower flows compared to the baseline. Impacts are likely to be temporary and reversible following completion of construction and reinstatement works. Bank and bed features would be degraded within the footprint of the works, although some channel bed impacts may be reversible following end of construction with mitigation provided to reinstate features where practicable, although any loss of bedrock may not be reversible. The temporary river training works could alter the channel dynamics, which could result in increased erosion and sediment transport rates. Impacts may cease following end of construction.</p> <p>4. As noted in Table 9-8 of Environmental Statement Addendum: Stabilisation Works for Change Request [REP4-063] and Table 8-8 of Environmental Statement Addendum: Southern Access Works for Change Request [REP4-064], the permanent scour protection may lead to a permanent but localised reduction in the availability of erodible sediment. Locally, the banks are not considered to be an important source of sediment for the channel. Some bank and near-bank bed features would be lost within the footprint of these works. The existing bank profile would be reinstated so alterations in channel cross section are anticipated to be minimal. Some alterations to channel roughness may occur. A reduction in roughness compared to the existing tree line bank may locally increase erosion rates. However, impacts are likely to be small, very localised to the channel margins and limited to the extent of the scour protection. The change in materials from which the bank is composed would, by design, reduce the channel's ability to adjust its position naturally and mature riparian vegetation would be lost. Increased run off may occur locally due to immature vegetation.</p> <p>5. The form of the catchment is controlled by the underlying geology and topography, the dominance of bedrock suggests that the timescales for adjustment are over hundreds to thousands of years, with lateral adjustment of the channel and bed constrained by the valley form. Whilst the rock armour would act as a barrier to any lateral movement, over the 120 year design life of the proposals, any lateral movement, in the absence of the proposals, would likely be very limited, given the substantial period of time over which channel adjustments would occur.</p> <p>6. The Applicant agrees that the north bank proposals may have the potential to decouple the slopes from the channel. However, the slope stabilisation works are intended to be localised in their extent to the slopes around the proposed north bank pier location and necessary for the integrity of the bridge pier foundations. There have been a number of valley side failures within the gorge, which have delivered sediment to the river. These failures will have historically supplied material to fluvial system and, at some locations in the gorge, continue to do so through the erosion of their toes. The change to planform caused by these failures is likely to be temporary and localised as fluvial action removes finer failed sediment, however large boulders may continue to have an influence on local flow conditions over longer periods. Specifically at the location of the north bank works, a wide, relatively gently sloping area adds significant lag to input of sediment from failures of the upper valley</p>
--	--	---

		<p>side to channel, as it will rest in this gently sloping area until removed by flooding.</p> <ol style="list-style-type: none"> 7. For the south bank, the primary route for delivery of material from the valley side to the river is from rockfalls. It is anticipated that any rockfalls on the south bank could still reach the channel, as the slope is steeper compared to the north bank, with some being arrested by the presence of trees. On this basis, it is not anticipated that the south bank slope processes would be decoupled from the channel by the presence of rock armour. 8. The Applicant does not agree that the proposals would impact the channel response beyond the footprint of the works for the reasons set out above. The bank protection works are not considered to change the morphological behaviour of the reach, or the function as a sediment transfer zone (Table 9-8 of Environmental Statement Addendum: Stabilisation Works for Change Request [REP4-063] and Table 8-8 of Environmental Statement Addendum: Southern Access Works for Change Request [REP4-064]).
80	<p>We do not share the Applicant's expectation that the information relating to the impacts of the changes associated with the Slope Stability and Southern Access works, will change the findings of the geomorphological assessment and that there are no significant effects as set out in Environmental Statement Addendum: stabilisation works – Rev 1 [Rep4-063] and Environmental Statement Addendum: southern access works – Rev 2 [Rep4-064]. Our position will be guided by the new work the Applicant is currently undertaking.</p>	<ol style="list-style-type: none"> 1. As set out in response 79 above, whilst the Applicant's assessments do not conclude significant effects with respect to geomorphology, a significant effect is concluded with respect to the River Coquet and Coquet Valley SSSI. 2. The Applicant has now provided the River Coquet Fluvial Geomorphology Assessment, completed with consideration of the outputs from hydraulic modelling, submitted as part of the Examination at Deadline 7 (River Coquet Fluvial Geomorphology Assessment (Document Reference 6.47)). This allows for verification of the results and assessment presented in Environmental Statement Addendum: Stabilisation Works for Change Request [REP4-063] (Chapter 9) and Environmental Statement Addendum: Southern Access Works for Change Request [REP4-064] (Chapter 8) and provides further detail on the spatial extents and changes in flow and sediment behaviours in the vicinity of the proposed works. 3. In the Scheme construction scenario, the assessment concludes that the extent and magnitude of the anticipated changes from the baseline are as reported Environmental Statement Addendum: Stabilisation Works for Change Request [REP4-063] and Environmental Statement Addendum: Southern Access Works for Change Request [REP4-064], with the exceptions of the extent of the 'backwater' effect as a result of the temporary works and the increases in stream power and modelled sediment entrainment potential. However, the potential for these changes from baseline were identified qualitatively in 6.38 Environmental Statement Addendum: Stabilisation Works for Change Request [REP4-063] and Table 8-7 and Table 8-8 of 6.40 Environmental Statement Addendum: Southern Access Works for Change Request [REP4-064] and, with the suggested mitigation, are not considered to significantly affect features of interest such as the mid-channel bar. As such, the overriding considerations in determining the significance of effect of the Scheme in the construction scenario stand, i.e. that the

		<p>works are of relatively short duration and the effects on fluvial processes are reversible.</p> <ol style="list-style-type: none"> In the Scheme operational scenario, the assessment concludes that the extent of anticipated changes is as reported in Environmental Statement Addendum: Stabilisation Works for Change Request [REP4-063] and Environmental Statement Addendum: Southern Access Works for Change Request [REP4-064], with notable change from the baseline being confined to the margins of the channel within the extent of the Scheme and immediately downstream. The Magnitude of Impact for the both the Stabilisation Works and Southern Access Works therefore remains the same as that presented (Minor adverse) in Table 9-7 and Table 9-8 of 6.38 Environmental Statement Addendum: Stabilisation Works for Change Request [REP4-063] and Table 8-7 and Table 8-8 of 6.40 Environmental Statement Addendum: Southern Access Works for Change Request [REP4-064], and therefore the Significance of Effect for all geomorphological impacts remains Slight (not significant).
<p>Deadline 5 Submission - 7.23 Applicant's Response to Procedural Decision on Changes to the Application [REP5-032]</p>		
81	<p>With respect to ref number 6, the Flood Risk Assessment must be updated to reflect the Hydraulic Modelling outputs. Without an update to the FRA it will be difficult to assess the flood risk impacts from the proposed changes. The EA's review of the hydraulic model will be limited to whether the model is 'Fit for purpose'.</p>	<ol style="list-style-type: none"> A Flood Risk Assessment Addendum has been submitted to the Examination at Deadline 7 (Flood Risk Assessment Addendum – River Coquet [REP1-067]). This concludes that with the exception of a localised decrease in flood levels (compared to that previously assessed) in the vicinity of the new crossing, there is no change in operational flood risk to local receptors as a consequence of the new pier positions and rock armour scour protection system. With regards to the construction phase, the hydraulic model has identified a hitherto unidentified impact on flood levels upstream of the new crossing. Whilst this impact results in a maximum increase in flood level of 0.144m in the vicinity of receptor A (Otter House / Shothaugh Farm) during the 0.1% AEP (1000-year) event, this is insufficient to change the flood risk to this receptor in real terms which remains 3.244m above the 0.1% AEP (1000-year) flood level during construction. The impact of this increase in flood level is seen on farmland which is already subjected to extensive flooding during the 0.1% AEP (1000-year) event.
<p>Deadline 5 Submission - Change Request - 6.28 Biodiversity No Net Loss Assessment for the Scheme (Clean) - Rev 3 [REP5-038]</p>		
82	<p>There appears to be a heavy reliance on the planting of woodland as mitigation or compensation for the loss of watercourse. We would welcome a package of works that would provide meaningful compensation for the loss of watercourses.</p>	<ol style="list-style-type: none"> This response should be read in conjunction with those for Items 5, 8, 13 and 15 of this document. The Applicant has previously provided a response to this comment at Deadline 6. As detailed in the Applicant's Response to Deadline 5 and 5a Submissions [REP6-040], proposed woodland planting along watercourses and channels has been identified as one of the measures that could improve the watercourses by providing bank strength, sediment capture and shading (for aquatic life) and also improving the linear connectivity of the watercourse for wildlife. Additional improvement measures identified that collectively form the current package of compensatory works include design of realigned

		<p>watercourse channels (138m, Part A) to be better (in terms of environmental condition and biodiversity value) than that lost, retrospective installation of fish baffles on the existing culvert of the River Lyne (Part A), replacement of the wooden baffles within an existing culvert of Longdike Burn (Part A) to increase the life span of this feature and improvements to the 850m of Longdike Burn that falls within the Order limits.</p> <ol style="list-style-type: none"> 3. The Applicant continues to engage with the Environment Agency with regards to the loss of watercourse as a result of culverting across the Scheme. The position of the Applicant is that sufficient measures have been identified to mitigate and/or offset the assessed impacts, although the Environment Agency disagree. In the Environment Agency Deadline 5 Submission [REP5-044], the Environment Agency outlined that the culverting and loss of watercourses as a result of the Scheme could be offset / compensated outside of the DCO boundaries, this remains under discussion. 4. The Applicant and Environment Agency have arranged a meeting for 18 May 2021 (earliest availability for relevant specialists) to discuss the matter in detail and seek agreement/resolution. A record of discussions and progress shall be documented within the statement of common ground for issue at Deadline 8.
83	<p>We note a net loss of 11.69% of watercourse and a gain of 7.21% of area based units and a failure of 4 out of 10 Net Gain Principles. Therefore, we would encourage opportunities to compensate for this loss with equivalent river based units. Where river units or length are lost, common compensation measures could include the re-naturalising and re-meandering of heavily modified and straightened watercourses. Re-naturalising of watercourses that are found to be highly modified and historically straightened will in the long term provide a benefit to ecology and river health, whilst potentially providing gains in river length lost by the scheme.</p>	<ol style="list-style-type: none"> 1. As detailed in previous written representations and discussed with the Environment Agency (most recently during a meeting on 07 May 2021), biodiversity no net loss or net gain is not a legal requirement under current planning law for Nationally Significant Infrastructure Projects (NSIPs) (such as this Scheme) and is also currently not mandatory at a local policy level. 2. Whilst not a requirement for a NSIP, a biodiversity no net loss report has been produced for the Scheme [REP5-038 and 039] in order to meet the Applicant's own internal biodiversity plan (Highways England Biodiversity Plan). As confirmed in the Applicant's Written Summary of Oral Submissions at Hearings [REP4-026], the Applicant looks to consider biodiversity impacts across its whole network on at a national scale as opposed to considering it on a scheme by scheme basis. The biodiversity no net loss report which has been produced will therefore be used to inform biodiversity changes at a national level and not at the scheme level. 3. The Applicant is grateful for the Environment Agency's advice regarding opportunities to compensate for the net loss of river biodiversity units. This will be considered within the Applicant's assessment of biodiversity across its network at a national level. 4. The Applicant confirms that the Biodiversity No Net Loss Assessment for the Scheme for Change Request [REP5-038 and 039] identifies a net loss of 11.69% in river biodiversity units, a net gain of 9.05% in area-based habitat biodiversity units and a net gain of 4.57% in hedgerow biodiversity units (as detailed in Table 3-1 [REP5-038 and -039]). 5. As detailed in Table 3-2 of the Biodiversity No Net Loss for the Scheme for Change Request [REP5-038 and 039], the Scheme is unable to achieve six of the ten Biodiversity Net Gain principles. However, this is

		primarily a result of the loss of ancient woodland, an irreplaceable habitat, which is unavoidable.
Deadline 5 Submission - Change Request - 6.45 Borrow Pit Dewatering Plan [REP5-040]		
84	The information outlined in this document addresses our previous comments.	1. Noted. No response required
85	Advice to applicant: The Applicant may need a permit from the EA for dewater activities. Discharge to surface water for dewatering purposes may be covered by a Regulatory Position Statement (RPS) for water discharge activities. If the Applicant is able to comply with all of the conditions within the RPS, then a permit is not required for this activity. Further information is available at https://www.gov.uk/government/publications/temporary-dewatering-from-excavations-to-surface-water/temporary-dewatering-from-excavations-to-surface-water	<ol style="list-style-type: none"> 1. Agreed. A groundwater dewatering permit will be applied for prior to construction phase. 2. Commitment EA-W1 of the Outline CEMP [REP6 025 and 026] has been updated at Deadline 7 to include: "A water resources abstraction licence (for dewatering activities) and Environmental Permit (for water discharge) will be required for the Scheme."
86	If any discharges do not fully comply with the RPS, then a bespoke discharge permit will be required. Guidance on applying for a bespoke water discharge permit is available at https://www.gov.uk/guidance/discharges-to-surface-water-and-groundwater-environmental-permits#standard-rules-permits-for-package-treatment-plants	<ol style="list-style-type: none"> 1. Agreed. A groundwater dewatering permit will be applied for prior to construction phase. 2. Commitment EA-W1 of the Outline CEMP [REP6 025 and 026] has been updated at Deadline 7 to include: "A water resources abstraction licence (for dewatering activities) and Environmental Permit (for water discharge) will be required for the Scheme."
Deadline 5 Submission - 7.6C Statement of Common Ground with Environment Agency - Rev 2 [REP5-017]		
87	We are working with the Applicant to address the issues outlined in this letter and in our previous correspondence.	1. Agreed, a Statement of Common Ground covering the issues raised by the Environment Agency was submitted at Deadline 6 [REP5-017], and it is proposed to submit a further updated Statement of Common Ground at Deadline 7.
Deadline 5 Submission - 3.1 draft Development Consent Order (Clean) - Rev 6 [REP5-005]		
88	It is our understanding that the Applicant does not seek to disapply any of the EA's consenting regimes. Therefore, the Protective Provisions in the draft DCO are acceptable.	1. The Applicant welcomes confirmation from the Environment Agency that the proposed Protective Provisions in the DCO [REP6-010 and 011] are acceptable.

Ref. No.	Action	Response:	Applicant's Response:
Appendix A: Actions arising from the Issue Specific Hearing 3 (ISH3) held virtually from the 21 to 22 April 2021			
Wednesday, 21 April 2021 – Issue Specific Hearing 3			
6	Environment Agency (EA) and the Applicant to provide Position Statement on	We do not believe the proposals put forward by the Applicant adequately mitigate or compensate for the disturbance and damage to, and the loss of watercourses associated with the scheme.	<ol style="list-style-type: none"> 1. The Applicant considers that the measures proposed adequately mitigate and / or compensate for the impacts upon the watercourses and channels, as discussed below.

Ref. No.	Action	Response:	Applicant's Response:
	<p>compensation and mitigation for the loss of watercourses and culverts.</p>	<p>In total an extra 427m of watercourse will be lost to culverting. The damage and loss of watercourses will be higher than 427m quoted, as they do not take into account additional infrastructure such as scour protection, wing walls etc and fail to recognise that the influence of the culvert on river processes will extend beyond the footprint of the structure itself.</p>	<ol style="list-style-type: none"> 2. The Applicant can confirm that it is predicted that the Scheme would result in the loss of 427m, as detailed within Annex A - Approach to the Assessment of Losses and Gains of Watercourses [REP2-010]. This comprises 271m for Part A and 156m for Part B. 3. These values represent the loss of linear length of watercourse channel. The loss of watercourse channel does not just simply relate to the length of a culvert/culvert extension and does take into account features such as headwalls and other physical modifications to the channel, such as realignment of channels, that result in the loss of natural channel (including bank and associated riparian vegetation). For example, on Floodgate Burn, the proposed extension to the culvert is approximately 6.7m (see Culvert Mitigation Strategy [REP5-022]). However, due to the additional realignment of the channel, the loss of watercourse is calculated to be 40.6m. 4. The measurements have been informed by the length of culvert or culvert extension, Structures and Engineering Drawings and Sections REP5-004, Phase 1 habitat plans (Part A [APP-105 and REP2-010] and Part B [APP-155]) and aerial imagery. As such, the calculated loss of channel is accurate as far as reasonably practicable with the information available. 5. The Applicant can also confirm that 1,240m of riparian planting is to be provided. Noting that the riparian planting, which will provide improvements to the watercourses to offset the impacts is one of the compensation measures included in the Scheme for loss of watercourse, other measures included within the comprehensive mitigation package are: <ol style="list-style-type: none"> a. Fish baffles b. Realigned watercourses c. Improvements to Longdike Burn; d. inclusion of natural beds within the culverts 6. This is a significant length when compared to the length of watercourse lost and is considered sufficient to also compensate for any short lengths of additional watercourse which may be lost when the construction requirements are known. This additional vegetation loss is shown on the Vegetation Clearance Plans for Change Request [REP4-040] for ease of interpretation by the Environment Agency a watercourse specific plan will be submitted at Deadline 8. The Applicant continues to engage with the Environment Agency with regards to the loss of watercourse as a result of culverting across the Scheme. The position of the Applicant is that

Ref. No.	Action	Response:	Applicant's Response:
			<p>sufficient measures have been identified to mitigate and/or offset the assessed impacts, although the Environment Agency disagree. In the Environment Agency Deadline 5 Submission [REP5-044], the Environment Agency outlined that the culverting and loss of watercourses as a result of the Scheme could be offset / compensated outside of the DCO boundaries, this remains under discussion</p>
		<p>Watercourses are valuable features of the landscape for people and wildlife. The EA have legal duties under the Environment Act 1995, the Water Environment (Water Framework Directive) Regulations 2017 and the Natural Environment and Rural Communities Act 2006, to ensure that they are protected and enhanced for the benefit of present and future generations.</p>	<p>1. The Applicant notes the Environment Agency's regulatory position.</p>
		<p>Culverting and related infrastructure works against the natural processes of watercourses. It can exacerbate the risk of flooding and increase maintenance cost and complexity. It leads to the loss of and adverse effects on morphology, fisheries and wildlife habitats including substrate. It also interrupts the continuity of the linear corridor of a watercourse, can affect channel stability and for aquatic species culverts create barriers to passage through increased water velocities, behavioural deterrent, shallow depths, darkness, oxygen depletion and eroded entrances.</p> <p>The WFD imposes legal requirements to protect and improve the whole water environment. In order to ensure physical alterations to watercourses meet WFD, and the wider environmental duties, including the Applicant's general duty to conserve biodiversity under the NERC Act 2006; modifications to the watercourses within the development envelope must not lead to deterioration in the quality of watercourses, prevent them from improving, and aim should seek to protect or improve a nature conservation area or priority habitat. Every opportunity should be sought to improve the water environment and habitat.</p>	<p>1. The Applicant has assessed the flood risk to the Scheme and third parties as a result of the Scheme and determined that there are no significant adverse effects, as detailed in:</p> <ul style="list-style-type: none"> a. Flood Risk Assessment, Part A [APP-254] b. Flood Risk Assessment, Part B [APP-311] c. Annex B - Flood Risk Addendum [REP1-067] d. Flood Risk Outside Order Limits [REP3-007] <p>2. The Applicant is not challenging the Environment Agency on the potential impacts on watercourses. However, culverts are an essential aspect of any linear infrastructure project, whereby necessity watercourses need to be crossed. The culverts have been designed to be as short as feasible and appropriate mitigation including natural beds have been included to reduce the impacts within the culverts.</p> <p>3. With the mitigation measures in place, the Applicant does not consider that the Scheme will lead to a deterioration in the watercourse, in WFD terms.</p> <p>4. The Scheme has a complex and numerous set of constraints, which have been worked through by the multidisciplinary design team to ensure that every opportunity is sought to improve the water environment and habitat, whilst balancing the impacts on the adjacent landowners and their associated uses.</p>
		<p>We consider the mitigation measures put forward by Applicant fall short of the industry standards such as the CIRIA's Culvert, Screen and Outfall Manual. For example, there is a failure to commit to a suitable depth of sediment within the culverts, especially for the Shipperton, Floodgate and Earsdon Burns and for the</p>	<p>1. The Applicant considers that the depth of the natural beds has been designed in line with the appropriate guidance, as detailed in the Applicants Response to Deadline 5 submissions in Table 1-1, Item 18 at Deadline 6 [REP6-040].</p>

Ref. No.	Action	Response:	Applicant's Response:
		<p>River Lyne. For all these waterbodies, the proposed bed depth is 150mm or less, rather than between 300-600mm.</p> <p>The invert of the culvert should be placed sufficiently low to allow the uninhibited movement of channel bedload sediment (ie set lower than the maximum entrainment depth, hence the recommendation of 300mm or greater on culverts greater than 1.8m wide). The retention of a natural bed provides connectivity for fish and invertebrates while minimising any disruption to the sediment regime. Thinner beds run the risk of being scoured out over time and downstream scour and erosion as shown in figures 11-1, 10-1, 7-1, 7-2 and 6-1 in the document 6.7 Environmental Statement – Appendix 10.2 Water Framework Directive Assessment Part A [APP-255].</p>	<p>2. The Applicant is considering the feasibility of incorporating a greater depth of natural beds within the culverts,</p>
		<p>In line with paragraph 5.33 of the National Policy Statement for National Networks, there is an opportunity to address legacy issues associated with the A1. On the Longdike and Shipperton Burns, there is an opportunity to address fish access issues within the DCO boundary.</p>	<ol style="list-style-type: none"> 1. Paragraph 5.33 of the National Policy Statement for National Network (NPS NN) states that development proposals potentially provide many opportunities for building in beneficial biodiversity. <i>“When considering proposals, the Secretary of State should consider whether the applicant has maximised such opportunities in and around developments. The Secretary of State may use requirements or planning obligations where appropriate in order to ensure that such beneficial features are delivered.”</i> 2. For Longdike Burn, as detailed in response 53 above, the only changes to the Burgham Culvert (10.1) are modifications to existing headwalls. The length of the culvert and its permeability to fish passage will not be adversely impacted by the Scheme. It has not been possible to lower the outlet of the culvert to align with the channel bed due to the extent of engineering works that would be required. However, the Applicant has proposed to improve long-term fish passage within the culvert by the replacement of the existing wooden baffles with more permanent structures to improve the lifespan of the feature (longer lasting material). This improvement is secured by measure A-B9 of the Outline CEMP [REP6-025 and 026] (and as updated at Deadline 7). 3. For Shipperton Burn, the potential legacy issue for fish passage relates to a minor road bridge downstream of the Shipperton Burn Culvert (Ref 27.1, Culvert Mitigation Strategy [REP5-022]). The outlet of the bridge has a small step between the base of the bridge/culvert and the channel. However, the outlet of the bridge is at the Order limits and therefore there is insufficient space to modify the outlet due the extent of engineering works that would be required. 4. The Applicant is in compliance with paragraph 5.33 of the NPS NN by committing to develop a strategy of biodiversity enhancements, based on the opportunities identified within paragraph 9.9.11 of Chapter 9:

Ref. No.	Action	Response:	Applicant's Response:
			<p>Biodiversity Part A [APP-048], paragraph 9.9.9 of Chapter 9: Biodiversity Part B [APP-049], and Section 3.2 of the Ancient Woodland Strategy [REP4-054 and 055]. The strategy will be developed in consultation with relevant stakeholders. This measure is secured by measure S-B20 of the Outline CEMP [REP6-025 and 026] (and as updated at Deadline 7).</p>
		<p>The proposed riparian woodland and wetland planting that has been presented as compensation for the culverted watercourses, is not considered appropriate compensation for the loss of, or disturbance to culverted and engineered waterbodies. In approximately 50% of the cases proposed for riparian tree planting, there are already riparian trees present along the proposed watercourse.</p>	<ol style="list-style-type: none"> 1. The Applicant understands the Environment Agency's concerns in relation to tree planting to be the presence of existing trees and construction disturbance. To demonstrate the impacts and the location of the tree planting the Applicant has committed to preparing and submitting a set of plans demonstrating how the vegetation loss as a result of construction links with the riparian planting which is part of the compensation for the loss of channel will be submitted at Deadline 8.
		<p>The re-routing of the Fenrother, Elsdon and the Kittycarter Burns provides an opportunity to significantly improve these channels. In accordance with paragraphs 5.23 and 5.33 of the National Policy Statement for National Networks, we consider that to date, the proposals suggested, and the space allocated to these realignments is very restrictive and misses an opportunity to improve biodiversity</p>	<ol style="list-style-type: none"> 1. The Scheme requires the re-alignment of tributaries of the Earsdon (it is assumed that this is the channel referred to by the Environment Agency as the Elsdon), Fenrother and Kittycarter Burns, not the main channel. Instead, these tributaries are essentially relatively straight uniform, ephemeral (i.e. non permanently flowing) field boundary ditches and are not designed as watercourses in Annex A - Approach to the Assessment of Losses and Gains of Watercourses [REP2-010]. This comprises 271m for Part A and 156m for Part B. 2. The Applicant considers that these channels are being recreated in a better form than their current status and further enhancements are not necessary to a field boundary ditch.
		<p>Our view is that the design of the new channel should be based around the predicated discharges rather than existing conditions.</p>	<ol style="list-style-type: none"> 1. The Applicant does not agree that the channel should be designed around the predicted discharges as this could result in a change to the flood regime. Notwithstanding this consideration will be given to the potential to contain the flood flows within the channel during detailed design. This is secured via changes in wording of the Outline CEMP for both A-B7 and A-W7 of the Outline CEMP [REP6-025 and 026] (updated and submitted at Deadline 7).
		<p>We consider that the design objectives should maximise the opportunities presented through the design of the new channel. The aim, as far as possible, accepting the local constraints, should be to re-establish the natural functioning of the channel, through naturalised flows, sediment transfer, patterns of erosion and deposition. Measures such as these will provide the most sustainable long term solutions delivering multiple benefits including climate resilience, sustainable flood management, improved biodiversity, reduced maintenance costs.</p>	<ol style="list-style-type: none"> 3. Given that as discussed previously many of the channels under discussion by the Environment Agency are field boundary ditches, returning them to their natural state (i.e. before they were created to artificially improve the land drainage) would not be practical or desirable.

Ref. No.	Action	Response:	Applicant's Response:
		<p>We suggest that the design of the new channels should be influenced by some of the ideas presented in the River Restoration Centre Design Manual. As an example, and while acknowledging it is not a direct comparison, case study 1.6 Opening up a culverted stream, the River Ravensbourne, highlights a number of techniques that could be adapted and incorporated into the design of the new channels.</p>	<p>The Applicant considers that the current indicative designs as detailed Water Framework Directive Assessments Part A and Part B [APP-255 and APP-312] provide an enhancement over and above the current condition of the field boundary ditches.</p>
7	<p>EA, Northumberland County Council (NCC) and Applicant to provide Position Statement in relation to the presence of Otters.</p>	<p>The Applicant has not fully taken into account historical records of otters and as such has not taken a precautionary or fully informed approach to their assessment, despite an acknowledgement that 'the desk study recorded 13 records of otter within the 2km search area. The Applicant must acknowledge the presence of offers and provide appropriate mitigation e.g. landscaping, mammal fencing etc</p> <p>We also disagree with the statement, 'the assessment considered those records within the last 10 years, as earlier records may not be relevant to the current ecological baseline'. Otters are generally seen to be experiencing a favourable increase in their distribution and population and as such, it is expected that populations of otter could be higher than what records indicate. Future increase in otter population, as is the goal of nature conservation for the species, should be taken into account due to the lifespan of the road and its increased barrier to mammal movement. Three records within 2km are within 10 years and again, these have not been considered in their assessment. A further 3 are within 15 years and a further 3 are within 20 years.</p> <p>Otters are likely present within 2km of the scheme and historical records show this with even more with 5km, which is not an unreasonable distance for otters to travel. As such, they have not considered the impacts the road widening might have on commuting otters. Even if the population is very low, by accepting that otters are likely to commute across the scheme, then they should consider even simple mitigation to reduce the increased chance of road mortality given otters may be less likely to use longer culverts or are more likely to be killed on the roads as they will need to cross 4 lanes instead of 2. Considering there is historical records of road mortalities on the A1 (6 records 2001-2009, 5 on the A1 2001-2008), then this shows the existing scheme is already acting as a barrier to movement and causing harm to otters.</p> <p>We suggest the Applicant applies the precautionary principle and includes measures within the outline CEMP to encourage mammals to use existing culverts and deter them from crossing the roads through landscaping or fencing. We recommend that historical records of road mortalities are utilised to identify areas of risk.</p>	<ol style="list-style-type: none"> 1. The Applicant provided a response to the points raised by the Environment Agency at Deadline 5, within the Applicant's Response to Deadline 4 Submissions [REP5-029]. As a brief summary, the Applicant's response at Deadline 5 confirmed that the Applicant's approach did take specific account of historical records obtained at the time of assessment. Historic records (latest otter record held by the Applicant dated back to 2015) were considered alongside the absence of otter field data, following the completion of surveys between 2016 and 2019. Of the historic nature of the desk study results, the negative field survey results over a number of years and the presence of predominantly suboptimal habitats to support the species informed a "likely absent" classification for otter within the Part B Order limits. The Applicant's Deadline 5 response also confirmed that, following extension, there are culverts that retain the ability to offer free passage to wildlife (particularly mammals) except in times of flood. 2. However, following Deadline 5 and Issue Specific Hearing 3, the Applicant held discussions with the Environment Agency on 23 and 30 April 2021 to explore the evidence for the presence of otter. Further evidence of otter adjacent to the study area for Part B (along Shipperton Burn) was provided by the Environment Agency at the meeting on 30 April, and the Applicant is considering this and the potential need for fencing along Part B at key crossing locations. 3. The Applicant is considering provisional ideas for fencing at four locations along Part B. These locations take account of historical records of otter mortality (dating back to 2011). The Applicant is actively engaging with the Environment Agency on this matter and is making progress to seek a resolution. The Applicant is expecting to be in a position to provide a substantive update at Deadline 8. Further discussions will be captured within the Statement of Common Ground with the Environment Agency [REP6-032] at Deadline 8.

Ref. No.	Action	Response:	Applicant's Response:
Thursday, 22 April 2021 – Issue Specific Hearing 3			
9	NCC and EA to respond to the Applicant's approach to construction mitigation documents.	<p>We are still in the process of reviewing the updated CEMP. We are working with the Applicant to ensure that the measures outlined in the REAC are appropriate and provide the necessary mitigation and or compensation for any impacts from the scheme.</p> <p>The CEMP could be better sign posted. It is unclear how the CEMP and the LEMP will be taken forward in the future in terms its implementation.</p>	<ol style="list-style-type: none"> 1. Noted. The Applicant is working with the Environment Agency to ensure all appropriate measures are captured in the Outline CEMP [REP6-025 and 026] (updated and submitted at Deadline 7). 2. The Outline CEMP [REP6-025 and 026] was updated at Deadline 6 to provide narrative on how the CEMP and LEMP (if produced) will interact. Diagram 1-1 illustrates how the LEMP would align with the CEMP and HEMP. Diagram 1-2 shows the numerous other documents that might influence the LEMP.

Table 1-2 – Defence Infrastructure Organisation

Ref	Response	Applicant's Response
1	I can confirm the MOD has no safeguarding concerns with this update to the proposal as received on 09/04/21. However, we remind the applicant and PINS of our previous request of details of any future designs for lighting columns which may be proposed for the two bridges (Heckley Fence Overbridge and Charlton Mires Junction) in order to perform the necessary safeguarding assessments. These areas pass through the 15.2m Statutory Technical Safeguarding Zone associated with RRH Brizlee Wood.	<ol style="list-style-type: none"> 1. The Applicant can confirm that lighting was scoped out of the assessment as set out in 6.7 Appendix 2.1 Lighting Assessment - Rev 1 [REP1-011] as there will be no lighting columns on any of the bridges forming part of the Scheme, including the two referenced overbridges in Part B at Heckley Fence and Charlton Mires.

Table 1-3 – Mark Hawes D6 Submission

Ref. No.	Response:	Applicant's Response:
This forms part of Deadline 6 response from Northgate Farm. The Response is directed at the Deadline 5 submission made by the Applicant referenced by 7.22 Applicant's Response to Deadline 4		
	As part of deadline 5 submission the Applicant has provided detailed responses (7.22 Applicant's Response to Deadline 4 Submissions) to each of the Northgate Farm responses provided in deadline 4. The deadline 4 submission having made in response to the Applicant's deadline 3 response to the written representation.	<ol style="list-style-type: none"> 1. No response required.
	In reading the responses the majority are reiterations or embellishments on points already made by the applicant in deadline 3. None of the responses provided served to ease or resolve our concerns. More importantly the responses do not provide any material change to the current position.	<ol style="list-style-type: none"> 1. The responses provided to Mr Hawes' written submissions are of a factual nature. The Applicant is required to provide a response to all points raised by interested parties such as Mr Hawes, and has provided responses to demonstrate that the

Ref. No.	Response:	Applicant's Response:
		<p>relevant assessments undertaken for the Scheme comply with the relevant guidance and/or standards.</p> <p>2. The Applicant has provided responses to the specific points raised by Mr Hawes at items 1 to 73, below.</p>
	<p>On responding here, the natural inclination was to make a further submission to address each of the points made by the Applicant. Inevitably this would have led to a further iteration by the Applicant in deadline 7. We do not believe continuing with this approach is helpful and have therefore chosen to break out of the current recursive loop by not responding to every point.</p>	<p>1. The Applicant has provided responses to the specific points raised by Mr Hawes at items 1 to 73, below.</p> <p>2. In addition to responding to Mr Hawes' written submissions, the Applicant continues to engage in discussions with Mr Hawes. Since ISH3, a meeting was held on 29/04/2021. with a further meeting scheduled for the week commencing 10/05/2021 to address Mr Hawes' concerns.</p>
	<p>The reality is that both parties have a very different perspective and will never agree on the impact upon the plans. The Applicant is looking to implement the scheme in the most costs effective manner and is duty bound to defend the submitted plans. Having lived at the property for over 25 years we are naturally protective of the lifestyle and benefits that we enjoyed to date and now believe are at risk. This should be respected by both parties.</p>	<p>1. The Applicant is cognisant of Mr Hawes' concerns and has continued to engage with Mr Hawes both through formal submissions and during meetings held throughout the development and examination of the Scheme. The Applicant will continue to work with Mr Hawes to address his concerns.</p> <p>2. The Applicant has assessed the environmental impacts of the Scheme, including on Mr Hawes' property, and proposed appropriate mitigation for those impacts in accordance with the relevant topic-specific guidance. In doing so, the Applicant has taken account of the concerns raised by interested parties such as Mr Hawes, both prior to application and during the course of examination.</p>
	<p>Notwithstanding the above position there is one point made by the Applicant in deadline 5 that does warrant a response. In deadline 5 the Applicant makes the following statement as part of the Summary section:</p> <p><i>The Applicant does not consider that there are 50 issues which remain outstanding. While extensive written submissions have been exchanged with Mr Hawes, the underlying points at issue are capable of being condensed into a set of key issues, which number rather fewer than 50. Discussions are ongoing with Mr Hawes to condense the points raised.</i></p> <p>In response to this comment, we felt it was appropriate and helpful to share a high-level summary of the issues as they stand today taking into account recent feedback from the Applicant. As a living document we continue to work with the Applicant to try to address specific issues on the list.</p>	<p>1. The Applicant will continue to work with Mr Hawes to address his concerns. In addition to the written responses provided at items 1 to 73, below, the Applicant is working with Mr Hawes and his agent to reduce the list of concerns.</p>
	<p>Although the number 50 was previously referenced to provide an indication of scale and breadth of the impact upon Northgate Farm this is not a numbers game. In presenting them as a list, our primary objective was to help the targeting of individual issues with possible mitigation.</p>	<p>1. The Applicant will continue to work with Mr Hawes to address his concerns. In addition to the written responses provided at items 1 to 73, below, the Applicant is working with Mr Hawes and his agent to reduce the list of concerns.</p>
	<p>We would much rather be in a position where the list was much smaller and we were able to support the scheme. Having objectively read and listened to various representations over the last 5 years the reality is that the scheme will have a significant effect on the property and the list of issues is long. From our perspective these are genuine concerns which stem from our detailed understanding of the plans. Whilst we do not profess to be planning experts, we are experts in knowing what we enjoy about the property and how the scheme will change our personal enjoyment. The list of issues shared below provides a summary of this viewpoint. We are hopeful that the Applicant is able to respect this opinion and does not feel compelled to counter each point.</p>	<p>1. The Applicant respects the views of Mr Hawes in relation to how he feels the Scheme may impact upon his property.</p> <p>2. The Applicant is required to provide a response to all points raised by interested parties such as Mr Hawes. However, in addition to the written responses provided at items 1 to 73, below, the Applicant will continue to work with Mr Hawes and his agent to reduce the list of concerns.</p>
<p>Loss of benefits</p>		

Ref. No.	Response:	Applicant's Response:
1	<p>The following provides a high-level view of some of the lost benefits:</p> <p>The loss of views. The outlook views from all corners of the property are significantly impacted by the expansion of the road, the noise barrier and the construction of the PMA.</p>	<p>1. The Applicant has responded to the points raised by Mr Hawes regarding the outlook from the corners of the property in its response to Items 1a – 1d, Follow-up response to Deadline 3 comments from the Applicant and Reference 6, Table 1-8 - Mark Hawes (page 80) - Deadline 4 Submission - Comments on responses submitted for Deadline 3 - Part 2 in Applicant's Response to Deadline 4 Submissions [REP5-029]. As previously stated, in accordance with DMRB IAN 135/10 and Guidelines for landscape and visual impacts assessment 3rd Edition, the assessment of visual effects as set out in Chapter 7: Landscape and visual Part A [APP-044] has appropriately and proportionately assessed the impacts on the occupants of the dwelling, as opposed the garden space. This assessment demonstrated that the visual effect would be large adverse during construction and slight adverse (not significant) during operation.</p>
2	<p>Easy commute to Newcastle has been lost.</p>	<p>1. As detailed at response 4F in Table 1-7 of the Applicant's Response to Deadline 4 Submissions [REP5-029], the existing direct access onto the A1 will be closed on the grounds of safety. As a result, there would be an additional journey distance for southbound journeys of approximately 0.78km on roads with a lower speed limit and through junctions. For northbound journeys, there is currently no direct access to the northern carriageway, so there is already a requirement to travel south to the junction at Morpeth in order to access the northbound carriageway. As referred to at Reference 4F on page 73 of the Applicant's Response to Deadline 4 Submissions [REP5-029], the benefits of the Scheme for drivers are set out at Chapter 4 of the Case for the Scheme [REP4-070], which would serve to offset the increased southbound journey distance.</p>
3	<p>Bus service on the doorstep has been lost along with car sharing.</p>	<p>1. The Applicant has acknowledged in Reference 5A on page 75 of the Applicant's Response to Deadline 4 Submissions [REP5-029] that there would be an adverse impact on residents at Warreners House (including residents at Northgate Farm) due to the loss of the bus stop in this location. This forms part of the population and human health assessment for the Scheme, as detailed at paragraph 12.10.15 and 12.10.18 of Chapter 12: Population and Human Health Part A [APP-054].</p> <p>2. The Applicant has not previously been made aware of any car sharing schemes which would be affected by the Scheme. The Scheme does not preclude car sharing.</p>
4	<p>Easy unfettered access to the property directly from a public road.</p>	<p>1. Pedestrian access along the A1 and into the property would be retained.</p> <p>2. The Applicant has acknowledged in response 4I on page 74 of the Applicant's Response to Deadline 4 Submissions [REP5-029] that the direct access to Northgate Farm from the A1 would be removed on the grounds of safety, and replaced with a private access from West View, to the south, to provide access to the property throughout construction and operation.</p> <p>3. As referred to at Reference 4F on page 73 of the Applicant's Response to Deadline 4 Submissions [REP5-029], the benefits of the Scheme are set out at Chapter 4 of the Case for the Scheme [REP4-070], which would serve to offset the loss of the direct access from the A1.</p>
5	<p>The convenience and enjoyment of friends popping in for coffee while passing.</p>	<p>1. The Applicant has provided a response in relation to the closure of the direct access to the Property from the A1 at items 2 and 4, above.</p>
6	<p>Privacy available in the garden.</p>	<p>1. The Applicant has responded to this point previously in Item 2 of Table 1-7 on page 50 of the - Applicant's Response to Deadline 4 Submissions [REP5-029],</p>

Ref. No.	Response:	Applicant's Response:
		and maintains that there is not any significant reduction in privacy as a result of parties accessing the PMA. Nevertheless, and as set out in that response, the Applicant has provided a hedgerow boundary to the garden space on the eastern and northern boundaries, as indicated on Landscape Mitigation Masterplan Part A [REP4-060].
7	Security of the property is compromised	1. The Applicant does not agree that the security of the property will be compromised. As set out in points 1.2, 1B, 1D, 2C and 4E in the Applicant's Response to Written Representations [REP3-026] and 1B2 on page 52 of the Applicant's Response to Deadline 4 Submissions [REP5-029] the combination of removal of direct access from the A1 and Private Means of Access (PMA) boundary treatment measures address the perceived security threat.
8	Easy access to footpaths at the west of the property and bridleway access to the south of the property.	1. The Applicant confirmed in 1.42.5.7 of the Response to Relevant Representations [REP1-064] that the footway along the eastern side of the A1 from Strafford House to the southern extent of the Scheme at the tie in to the existing dual carriageway is proposed to be retained, as shown on Sheet 1 of the Rights of Way and Access Plans [REP6-006]. 2. In the vicinity of Northgate Farm, a new section of bridleway would be provided, extending on from Bridleway 407/010, which would tie into the road network north of Morpeth at West View. This is shown on Sheet 1 of the Rights of Way and Access Plans [REP6-006] and was referred to in the Applicant's response to Mr Hawes at 5.6 of the Applicant's Response to Written Representations [REP3-026].
9	Lost kerb appeal to the property.	1. The Applicant has previously responded to points raised about potential impacts on the so-called kerb appeal of the property, including the provision of details of the proposed planting in this location, at item 4 of Table 1-6 – Mark Hawes in the Applicant's Response to Written Representations [REP3-026] and at item 3 of Reference 2, Table 1-7 - Mark Hawes - Deadline 4 Submission - Comments on responses submitted for Deadline 3 - Part 2 in Applicant's Response to Deadline 4 Submissions [REP5-029].
10	Safe woodland to play and relax.	1. The Applicant maintains the position set out in points 1.3 and 1D1 of the Applicant's Response to Written Representations [REP3-026] and confirmed in Table 1-7 on page 50 of the Applicant's Response to Deadline 4 Submissions [REP5-029] that there is no acquisition of land within Mr Hawes' garden. Rather, there would be the acquisition of rights to facilitate the construction of the new PMA and the associated planting. The questions of privacy and security are addressed in the Applicant's response to items 6 and 7, above.
<p>The above list focusses solely on key benefits lost by the scheme they do not include other detrimental impacts such as increase in noise or loss of trees. The following provides a high-level view of the outstanding concerns relating to the Northgate Farm.</p>		
<p>Acquisition of permanent rights 1-8b</p>		
1	Tree loss in woodland. Loss of trees and hedgerow within the wooded area as part of the PMA construction. A potential risk of losing further loss of trees in the future with the close proximity of the access road compromising the root system.	1. The Applicant has previously responded to the points raised by Mr Hawes in relation to the loss of trees on the north east and eastern boundary to the garden, within plot 1-8b. This is provided in response to item 4 of Follow-up response to deadline 3 comments from the Applicant – Reference 1, Table 1-7 - Mark Hawes - Deadline 4 Submission - Comments on responses submitted for Deadline 3 - Part

Ref. No.	Response:	Applicant's Response:
		<p>1, Applicant's Response to Deadline 4 Submissions [REP5-029]. In addition, the Applicant's document Written Summary of Oral Submissions at Hearings – Appendix D – Warreners Private Means of Access [REP4-029] explains that the position presented in Change Request - 2.9 Vegetation Clearance Plans - Rev 2 [REP4-040] as to the removal of trees represents a reasonable worst case assessment, sets out how the Applicant will avoid the unnecessary removal of trees and outlines methods by which any remaining trees would be retained and protected, including measures to avoid impacts on root zones.</p>
2	<p>Security Risk. The woodland area of the property is an integral part of the garden which provides a secure place to enjoy day and night. The close proximity of the access road changes all of that. It can no longer be considered a secure area where tools and machinery. Furthermore, the position of the road provides a point of unprotected access to the property which does not have security cameras and lighting.</p>	<p>1. The Applicant has provided a response in relation to security at item 7, above.</p>
3	<p>Safe Play area lost. The woodland has provided a safe haven for Children and pets to play without fear and risk. The introduction of the road means that this is no longer an option. Furthermore, we will no longer feel safe sitting in woodland at night.</p>	<p>1. The Applicant maintains the position set out in points 1.3 and 1D1 of the Applicant's Response to Written Representations [REP3-026] and item 10 above. The questions of privacy and security are addressed in the Applicant's response to items 6 and 7, above.</p>
4	<p>Wildlife. The construction of the access road wrapping around the woodland will reduce the level of wildlife which visits the woodland which includes Owls, hedgehogs, Stoats, Badgers, Deer and bats. We have invested a lot of time in encouraging wildlife in this area. The access road will create a barrier around woods deterring its use by some wildlife. The wildlife does not need be on the protected species list for us to enjoy. For example, we particularly enjoy watching deer in the woods.</p>	<p>1. It is incorrect to state that the access road will reduce the level of wildlife that visits the woodland. As stated in the Applicant's Response to Deadline 4 Submissions [REP5-029], "<i>as a private means of access, the road constitutes a single lane with a proposed width of 4.8m [REP4-029] that would be expected to be used infrequently by vehicles. As such, the access road would not create a barrier to wildlife including deer, which can and do cross roads</i>". This statement is also applicable to other wildlife raised by Mr Hawes within his written response, including owls, hedgehogs, stoats, badgers and bats, should these species visit the woodland.</p> <p>2. It should be noted that the Applicant has undertaken full ecological surveys to inform the assessment of the Scheme, which included surveys for birds (including barn owl), badger and bats. The baseline ecological surveys did not identify any barn owl nest/roost sites [APP-238 (confidential), badger setts [APP236 and 237] (confidential) or bat roosts [APP-235] within the woodland block in question. As detailed in paragraph 9.7.22 of Chapter 9: Biodiversity Part A [APP-048], targeted surveys for hedgehog were not undertaken and the species was recorded incidentally when encountered during other surveys completed. Stoat and deer are not Species of Principal Importance (SPI), in accordance with Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006, and therefore surveys were not required. The Applicant acknowledges that these species may not be resident, but may visit the woodland block, which would remain accessible upon completion of the Scheme.</p>
5	<p>Additional Noise from Vehicles in the woodland. With the number of journeys exceeding 20 per day there will be a noticeable increase in the noise levels in the woodland area. This is further exasperated by the absence of speed limits on the road.</p>	<p>1. Noise from vehicles using the new access road has been addressed by the Applicant previously within Ref No. 7E row 2 (on page 84) of Table 1-8 within Applicant's Response to Deadline 4 Submissions [REP5-029] which in relation to this point stated:</p> <p>2. "<i>...it is anticipated that any vehicle movements on the access road would be infrequent and short in duration and therefore, for the majority of the time, this area would not experience noise from vehicles on the access road. Whilst noise</i></p>

Ref. No.	Response:	Applicant's Response:
		<p><i>from infrequent vehicles on the access road may be audible, given the low number of daily vehicle trips expected and the likely low speed of vehicles given the nature of the access road, the use of the access road would be expected to have an inconsequential effect on noise levels in this area and would not change the overall noise environment of the area, which is already substantially influenced by road traffic from the A1."</i></p> <p>3. It is not correct that speed limits are absent – the road will be subject to the National Speed Limit.</p>
6	Views from the woodland. We particularly enjoy sitting in the woodland with uninterrupted views across the fields in all directions. The new access road will become the prominent feature blocking views to the south, east and North.	<p>1. The Applicant has responded to the points raised by Mr Hawes regarding the outlook from the corners of the property, including views from the edge of the woodland on the north-east boundary, in its response to Items 1b, Follow-up response to deadline 3 comments from the Applicant – Reference 6, Table 1-8 - Mark Hawes - Deadline 4 Submission - Comments on responses submitted for Deadline 3 - Part 2 in Applicant's Response to Deadline 4 Submissions [REP5-029]. As previously stated, in accordance with DMRB IAN 135/10 and Guidelines for landscape and visual impacts assessment 3rd Edition, the assessment of visual effects as set out in Chapter 7: Landscape and visual Part A [APP-044] has appropriately and proportionately assessed the impacts on the occupants of the dwelling, as opposed the garden space. This assessment demonstrated that the visual effect would be large adverse (significant) during construction and slight adverse (not significant) during operation.</p>
7	Woodland Privacy. We have been fortunate enough to have enjoyed the woodland to relax and recharge the batteries in the knowledge that we had complete privacy and would not be interrupted. The construction of the access road will mean that all parts of this garden will be exposed to the road.	<p>1. The Applicant has provided a response in relation to privacy, including in the woodland area, at item 6, above.</p>
Acquisition of permanent rights 1-8a		
8	Kerb Appeal. All kerb appeal is lost with the current proposed access. The stone wall entrance is replaced with views of tarmac and an array of metal constructions on the adjacent property which are not picturesque.	<p>1. The Applicant has provided a response in relation to kerb appeal at item 9, above.</p>
9	Loss of trees. To accommodate the new access further trees will need to be felled thereby further exposing the widened carriageway. No provision has been made to retain the existing banks of soil.	<p>1. With reference to the loss of trees, the Applicant has consistently acknowledged that there would be a loss of a limited number of trees, including adjacent to the existing access to Capri Lodge to provide access via the PMA. Previous responses to the points raised by Mr Hawes in relation to the removal of trees within plot 1/8a are provided to item 1d, Follow-up response to deadline 3 comments from the Applicant – Reference 6C, Table 1-7 - Mark Hawes - Deadline 4 Submission - Comments on responses submitted for Deadline 3 - Part 1, Applicant's Response to Deadline 4 Submissions [REP5-029].</p> <p>2. With reference to the existing banks of soil within plot 1/8a, in ensuring that the existing planting is retained as far as is practicable, this is secured in S-L2 of Table 3.1 – Register of Environmental Actions and Commitments within the Outline CEMP [REP6-025]. To ensure access for vehicles, it will be necessary for measures to be identified at the detailed design phase, which includes for the retention of the mounded soil banks on which the existing vegetation is established.</p>

Ref. No.	Response:	Applicant's Response:
10	Water supply. The current PMA route crosses over two different water pipes. At this stage there is no provision to address this.	<ol style="list-style-type: none"> 1. The Applicant has acknowledged in response 6A1 of the Applicant's Response to Written Representations [REP3-026] that the PMA will allow access to the existing private water meter. Principles of the diversion of the water supply were confirmed to Mr Hawes on the liaison call on 14/04/21. The DCO application has made allowance for all statutory undertaker diversions. 2. Draft protective provisions for utilities and statutory undertakers are contained in Part 1 of Schedule 10 to the DCO [REP6-010 and 011]. The Applicant has engaged with all statutory undertakers and utility providers impacted by this Scheme, and utilities that are required to be relocated to allow the safe construction of the Scheme will be undertaken by the utility owner unless agreed otherwise.
11	Landscape Design. A significant amount of effort and investment has been made over the last 25 years to landscape the garden. The landscape design was purposely customised to orientate around the current access. The proposed plans will effectively negate much of this work requiring significant rework.	<ol style="list-style-type: none"> 1. As has been stated previously in item 9 above, the proposed access for the PMA on the northern boundary would broadly align with the existing access between Northgate Farm and Capri Lodge, as shown on Sheet 1 of the General Arrangement Plans [REP6-005]. The access design, to ensure that access is maintained, will be considered at the detailed design stage. The Applicant's document Written Summary of Oral Submissions at Hearings – Appendix D – Warreners Private Means of Access [REP4-029] explains that the position presented in Change Request - 2.9 Vegetation Clearance Plans - Rev 2 [REP4-040] would extend to the full length of the PMA. As such, the landscape design of the garden space and turning head will ensure that the existing planting/design is retained as far as is practicable, it however will be necessary for measures to be identified at the detailed design phase in order to achieve this. The design of the circulation access and integration with the garden space will be secured through a suitably worded measure in the Outline CEMP, once agreement on the alignment and access point has been reached with Mr Hawes.
12	HGV turning. There is no provision in the plans for large HGV vehicles to turn around with the new access direction.	<ol style="list-style-type: none"> 1. The Applicant can confirm that vehicle tracking has been undertaken along the proposed route to assess its suitability for use by the various agricultural vehicles understood to utilise the Warreners House access (Massey Fergusson 7278 combined harvester and trailer, farm tractor and hay wagon and Case IH CVX 195 tractor). The PMA layout would allow for a light commercial vehicle to undertake a three-point turn. Large HGV vehicles have not been provided for, as the Applicant understands that these would not utilise the PMA during either the construction or operational phases.
13	Minimal protection offered by trees. Great store has been placed by the Applicant in the masking properties of the trees in this area. Unfortunately, the trees are at an age where they have become "quite leggy" and will not mask the A1 when construction is completed	<ol style="list-style-type: none"> 1. As has been stated previously in item 5.3 of Table 1-1 – Issue Specific Hearing 3 - Day 1 – Environmental Matters in the Applicant's Written summaries of Oral Submissions to Hearings at Deadline 6 [REP6-044], there is a strong block of planting on the western boundary of the existing A1 to the west of the property, which screens the A1. The noise barrier is a new visual feature but the combined effect of the noise barrier and the existing vegetation to the west side of the boundary, would be to substantially screen views of the Scheme. The management of Mr Hawes' existing planting is outside the scope of the Scheme. Mr Hawes is, of course, entitled to maintain his own planting.

Ref. No.	Response:	Applicant's Response:
Placement of Layby close to the property		
14	View of HGV Vehicles. Laybys are commonly used by HGV vehicles to provide a stopover. As such the view of parked HGV vehicles will be a prominent view on the landscape. The view of HGV vehicles will be particularly prominent on the approach to Northgate farm via the new PMA access road.	<ol style="list-style-type: none"> 1. With reference to views of the proposed layby from the property, the Applicant has responded to this point previously in Item 1 of Follow-up response to deadline 3 comments from the Applicant – Reference 2, Table 1-7 - Mark Hawes - Deadline 4 Submission - Comments on responses submitted for Deadline 3 - Part 1, Applicant's Response to Deadline 4 Submissions [REP5-029]. Views from the property, including views of any HGVs using the layby, would be substantially mitigated through the retention of existing vegetation on the western and northern boundaries, with the exception of a narrow gap to facilitate the construction of the proposed PMA, but which would gradually be screened as the proposed mitigation hedgerow and trees to the north establish. The Applicant has identified on Landscape Mitigation Masterplan Part A [REP4-060], where this vegetation would be retained or provided, and this is secured through item S-L2 (c) of Table 3.1 – Register of Environmental Actions and Commitments: The Scheme in the Outline Construction and Environmental Management Plan (CEMP), updated at Deadline 4 [REP6-025].
15	Layby Assistance. Laybys are essential to assist broken downs vehicles. Unfortunately, it is also common that they look to the local properties for assistance.	<ol style="list-style-type: none"> 1. The Applicant maintains the responses to point 2B1 of the Applicant's Response to Written Representations [REP3-026] and point 2 of Follow-up response to deadline 3 comments from the Applicant – Reference 2B responded to in the Applicant's Response to Deadline 4 Submissions [REP5-029].
16	Security risk. The layby provides a convenient legitimate place to park for anyone wishing to burgle the local properties.	<ol style="list-style-type: none"> 1. The Applicant maintains the responses to point 2C1 of the Applicant's Response to Written Representations [REP3-026] and point 2 of Follow-up response to deadline 3 comments from the Applicant – Reference 2C responded to in the Applicant's Response to Deadline 4 Submissions [REP5-029].
17	Mitigation Constraint. The wide expanse of the layby minimises what can be done to the landscape to mitigate the impact of removing the hedgerow and coronation trees.	<ol style="list-style-type: none"> 1. The Applicant maintains the responses provided at point 2/D of the Applicant's Response to Written Representations [REP3-026] and point 2/1 on page 59 of the Applicant's Response to Deadline 4 Submissions in Table 1-7 responded to in the Applicant's Response to Deadline 4 Submissions [REP5-029].
18	Antisocial behaviour. Unfortunately it is common to see antisocial behaviour at laybys.	<ol style="list-style-type: none"> 1. The Applicant does not foresee that the operational maintenance of this layby will lead to anti-social behaviour and there is no reason to suppose that it would. The Applicant maintains the responses point 2F1 of the Applicant's Response to Written Representations [REP3-026] and Reference 2F responded to on page 63 of the Applicant's Response to Deadline 4 Submissions [REP5-029].
19	Rubbish. It is common to see layby bins overflow with rubbish despite regular emptying. In addition, there are plenty of examples where the layby has been used to fly tip.	<ol style="list-style-type: none"> 1. The Applicant maintains the same response to point 18 above that it does not foresee that the operational maintenance of this layby will suffer from overflowing bins and fly tipping. 2. Requirement 4 of Schedule 2 to the dDCO [REP6-010 and 011] requires the Scheme to be constructed in accordance with the CEMP approved by the Secretary of State, which must be based on the Outline CEMP [REP6-025 and 026] (and as updated at Deadline 7). Further, paragraphs 4 to 6 of Requirement 4 require a HEMP to be developed by the end of the construction, addressing matters in the CEMP relevant to operation and maintenance. The Scheme must then be operated and maintained in accordance with the HEMP.
Placement of Soil depot close to the property		

Ref. No.	Response:	Applicant's Response:
20	Picturesque cottage lost. The widening of the road and the establishment of the soil depot will result in the stone cottage being demolished.	<ol style="list-style-type: none"> 1. The blight notice in respect of Northgate House was received in 2017 and accepted by the Applicant. This has been triggered by construction of the new northbound carriageway of the A1. There is no depot in the vicinity of Mr Hawes's property, as detailed further at item 3 of Table 1-6 on page 34 in the Applicant's Response to Written Representations [REP3-026] and item 2 of Reference 3, Table 1-7 on page 63 of in Applicant's Response to Deadline 4 Submissions [REP5-029] . While there is a temporary soil storage area, Topsoil Storage Location 1 as shown on Sheet 2 of the Landscape Mitigation Masterplan Part A [REP4-060], this has not triggered the demolition of Northgate House. 2. With reference to the visual effect of the removal of the stone cottage, the Applicant maintains the response to 3B on page 36 of the Applicant's Response to Written Representations [REP3-026] and Reference 3B/1 on page 65 of Table 1-7 in the Applicant's Response to Deadline 4 Submissions [REP5-029].
21	Loss of additional trees due to Swale Maintenance access road. The scale of trees and vegetation loss, to facilitate the Swale maintenance, is significant and much greater than that depicted in the plans.	<ol style="list-style-type: none"> 1. The alignment of the access road has been designed so as to minimise the potential impacts on the adjacent woodland, as indicated on Change request – Vegetation Clearance Plans [REP4-040]. The Applicant maintains the response to point 3A on page 35 of the Applicant's Response to Written Representations [REP3-026] and Reference 3F/1c and 3 on page 68 of Table 1-7 in the Applicant's Response to Deadline 4 Submissions [REP5-029].
22	Additional Access Road. The new swale maintenance road and associated works will become a prominent part of the view to the west of the property replacing the current woodland outlook.	<ol style="list-style-type: none"> 1. The Applicant maintains the response to point 6 on page 44 of the Applicant's Response to Written Representations [REP3-026] and Reference 3F/1a of Table 1-7 on page 68 in the Applicant's Response to Deadline 4 Submissions [REP5-029]. The access road would not contribute to a significant visual effect.
23	A697 road view. The planned swale works will require trees to be removed thereby thinning the protected cover currently provided.	<ol style="list-style-type: none"> 1. The Applicant maintains the response to point 6 on page 44 of the Applicant's Response to Written Representations [REP3-026] and Reference 3F/1b of Table 1-7 on page 68 in the Applicant's Response to Deadline 4 Submissions [REP5-029]. Vegetation removal is not anticipated to expose direct, unfiltered views of the A697 where they do not currently exist.
24	Access of vehicles to the depot will add to the air quality, dust and noise concerns during the construction period.	<p><u>Air Quality</u></p> <ol style="list-style-type: none"> 1. Air quality impacts, including dust, associated with vehicles accessing the soil storage area have been addressed by the Applicant previously within Ref No. 3 row 4 (on page 64) of Table 1-7 within Applicant's Response to Deadline 4 Submissions [REP5-029] which in relation to this point stated: <i>"1. The construction dust assessment set out in Chapter 5: Air Quality Part A [APP-040] and Appendix 16.4: Air Quality Likely Significant Effects of the Scheme [APP-330] considers the impacts of construction activities at all receptors within 200m of the Scheme red line boundary. The assessment considers all potential construction activities associated with a major scheme, such as the Scheme in question, including the use of stockpiles. The receptors, including Mr Hawes' property, are shown in Figure 5.4 Construction Receptors Part A [APP-078]. With the application of the recommended mitigation measures, which are set out within the Outline CEMP [REP4-013 and 014] (and as updated at Deadline 5), the conclusion of the construction dust assessment is that there would be no significant air quality effects resulting from the Scheme during construction.</i>

Ref. No.	Response:	Applicant's Response:
		<p>2. The construction traffic assessment set out in Appendix A of Appendix 16.4: Air Quality Likely Significant Effects of the Scheme [APP-330] considers the impact of construction traffic on pollutant concentrations at human receptors. The conclusion of this assessment was that pollutant concentrations remain would well below the relevant air quality standards, and that there would be no significant air quality effect as a result of construction of the Scheme, including at Mr Hawes' property."</p> <p><u>Noise</u></p> <p>2. Noise impacts associated with vehicles accessing the soil storage area have been addressed by the Applicant previously within Ref No. 3 row 5 (on page 64) of Table 1-7 within Applicant's Response to Deadline 4 Submissions [REP5-029] which in relation to this point stated:</p> <p>"Noise generating activity associated with the soil store has been considered and assessed as part of the earthwork's activity within Chapter 6: Noise and Vibration Part A [APP-042]. The potential for noise impacts resulting from construction traffic has also been assessed within Chapter 6 Noise and Vibration Part A [APP-042] and Appendix 16.5 Noise and Vibration Likely significant Effects of the Scheme [APP-331]. Construction mitigation measures are set out in the Outline CEMP [REP-013 and 014] (and as updated at Deadline 5) within Section 3 Register of Environmental Actions and Commitments. The construction noise and vibration assessment within Section 6.10 Assessment of Likely Significant Effects of Chapter 6 Noise and Vibration Part A [APP-042] concludes that, following the implementation of mitigation, no significant adverse noise effects are predicted during the construction stage of the Scheme, including at this property."</p>
25	Soil Deposit view. The views of open field of countryside will be blocked by the soil deposit during construction.	1. The Applicant maintains the response to Reference 3F/1f of Table 1-7 on page 70 of the Applicant's Response to Deadline 4 Submissions [REP5-029], in relation to the temporary soil storage area.
Access to the property		
26	Viable route concern. The owners of the adjacent property have communicated directly they will not accept any shared use of the access road over their property.	<p>1. The Applicant confirmed in point 2 of Reference 4 on page 70 of the Applicant's Response to Deadline 4 Submissions [REP5-029] that the new owner of Capri Lodge now wishes to avoid a shared access situation, although they support the closure of the existing direct A1 access. Discussions are ongoing with both Mr Hawes and the new owner of Capri Lodge to explore alternate solutions.</p> <p>2. Ultimately, if a power to acquire a right is granted, the view of either landowner is not determinative.</p>
27	Increased Journey time. Access to the property from the North will take much longer to complete with circa 3 extra miles of travel and an additional 15-minute journey to access the property. Similarly, journeys to the south will take much longer.	1. The Applicant has acknowledged in response 4F on page 73 of the Applicant's Response to Deadline 4 Submissions [REP5-029] that removal of the direct access to Northgate Farm from the A1 on the grounds of safety, and replacement with a private access, would result in, for southbound journeys, an additional 0.78km journey by vehicle to the property. However, this would be somewhat offset by the improvements to journey times on the A1 and access to the property will remain throughout construction and operation. For northbound journeys, there is currently no direct access to the northern carriageway, so there is already a requirement to travel south to the junction at Morpeth in order to access the northbound carriageway.

Ref. No.	Response:	Applicant's Response:
28	Loss of Convenience. The convenience and enjoyment of friends popping in for coffee while passing the property will be lost.	1. The Applicant has provided a response in relation to the closure of the direct access to the Property from the A1 at items 2 and 4, above.
29	Beholden to 3 additional property owners. The new access road to the property will entail travelling through the property of 3 different owners. As such are very vulnerable to potential uses of the respective properties which would compromise the Northgate household.	1. The Applicant maintains the response in point 4G1 of the Applicant's Response to Written Representations [REP3-026] and point 1 of Follow-up response to deadline 3 comments from the Applicant – Reference 4G responded to in the Applicant's Response to Deadline 4 Submissions [REP5-029].
30	Different usage. The different owners will have a different expectation on how the road should be maintained leading contention and possible conflict. For example, the farm use of the road will be very different to domestic use.	1. The Applicant maintains the response in point 4J1 of the Applicant's Response to Written Representations [REP3-026] and point 1 of Follow-up response to deadline 3 comments from the Applicant – Reference 4G responded to in the Applicant's Response to Deadline 4 Submissions [REP5-029].
31	Access to the rear of the property by car. To get access to the rear of the property (to carry out maintenance and manage the water supply) by car the new plans require a journey of over 1k, travelling through 5 different properties.	1. The Applicant maintains the response in point 4H1 of the Applicant's Response to Written Representations [REP3-026].
32	High level dependency on 6 different property owners acting reasonably. The new arrangement relies upon 6 different property owners to operate corroboratively and fairly in maintaining the access roads. There is a real risk that the access will become compromised with any relationship fall-out. This has happened in the past and unfortunately is likely to happen again. This arrangement will be a constant source of contention going forward and is not sustainable. Unfortunately, even before the route has been established this issue has created a conflict with one owner not accepting access through their property.	1. The Applicant maintains the response in points 4B1, 4B2 and 4I1 of the Applicant's Response to Written Representations [REP3-026] and the response to point 29 above. 2. The Applicant has also provided a response in relation to the new owner of Capri Lodge's position as to the access road at item 26 above.
33	Extra Burden. The maintenance of the new access road will place an additional obligation on the property that will deter future buyers.	1. The Applicant will provide compensation in respect of any additional financial burden placed upon the property as a result of the extended shared access. There are many properties bought and sold with shared access arrangements and maintenance provisions. In this case it is considered the improved safety associated with the proposed new access will outweigh any negative effect linked with maintenance of the PMA.
34	Vehicle speed. The new PMA road does not have any speed limit or constraints. As such vehicles could reach speeds of 60mph. As pedestrians are expected to share the road with the vehicles this would pose a real safety risk, particularly at night.	1. The rural nature of the PMA, narrower widths and presence of bends will regulate vehicle speeds. The cross section of the PMA includes verges that can be used by walkers. Users would be accessing the residential properties or the fields to the north, and the PMA would have appropriate signs to discourage unauthorised use, to be set out in the signage strategy which will form part of the Construction Environmental Management Plan (CEMP) [REP6-025 and 026] secured by Requirement 4 of the draft DCO [REP6-010 and 011].
35	Farm shooting. In the past the farmer has participated in bird shooting in the same field as the new PMA. If this is to continue in the future, then it would not be safe to use the access road on those occasions.	1. The Applicant understands that there are no formal shoots held in this area. The Applicant would suggest that any shooting noises have been caused by either the farmer shooting or bird scarers. The Applicant will continue discussions with the landowner on future operations in the fields adjacent to the PMA.
36	Snow Clearance. There have been occasions in the past when snowfall would have would have left us blocked in the house for more than a week, (even with a 4X4 car) if our only means of access was the PMA. Three years ago, the local fulbeck road was impassable for over 2 weeks due to snow.	1. The Applicant maintains the response in points 4B1 and 4B2 of the Applicant's Response to Written Representations [REP3-026]. The standard provision is that the landowner for each section of the proposed access would be liable for its maintenance. This would apply to snow clearance. Additional maintenance burden (if any) as a result of the Scheme is a matter to be addressed through discussions as to compensation.

Ref. No.	Response:	Applicant's Response:
37	Road Cleaning. There is no provision for cleaning.	1. The Applicant maintains the response in points 4B1 and 4B2 of the Applicant's Response to Written Representations [REP3-026] and the response to point 36 above.
38	Type of use on the PMA. At this stage there is no covenant protecting how the road will be used in the future. Without protection the road could be used to facilitate potential business use which radically increases road usage and add extra detriment to the property.	1. Any future business uses or activities at Warreners beyond that which is currently permitted would require planning permission which would be based on the merits of that development and separate to the Scheme. Mr Hawes would have the opportunity to object or comment on any application. New developments would need to set out their traffic generation as well as any other potential changes to the locality in a Planning Application made to NCC who would make their decision accordingly, on a case by case basis, as to whether it would be able to grant permission on the basis of taking access along this PMA.
39	Emergency services. The time taken for emergency services to reach the property will significantly increase. This also applies to other delivery services. There is a real risk that some services will refuse to deliver, particularly as it involves travelling over a private road.	1. The Applicant acknowledges that the proposed access to the property would result in a greater distance to travel to and from the A1. However, the existing direct access onto the A1 will be closed on the grounds of safety as a result of the Scheme. The Applicant does not consider the proposed PMA to act as a deterrent for delivery services, as it will be constructed to Northumberland County Council's Residential Roads and Footpaths in Northumberland guidance. 2. Detailed design of strategic destinations for Advance Directional Signs (ADS) and other approved signs are to be confirmed in the Signage Strategy. The outline CEMP [REP6-025 and 026] (references S-PH3 and S-PH5) confirms that appropriate signage for the Scheme will be implemented to avoid creating route uncertainty and that during construction temporary signage and layout will be clear to avoid creating route uncertainty. The outline CEMP (reference S-PH5) also confirms that any diversions or closures during construction will be advertised and any diversion routes will be clearly signposted and not lead to uncertainty.
40	Navigation. As it will no longer be possible to navigate to the property by Google maps and other sat nav services this will create a number of problems in the future.	1. As stated in point 3.1 of Follow-up response to deadline 3 comments from the Applicant – Reference 4F, responded to in the Applicant's Response to Deadline 4 Submissions [REP5-029], changing satellite navigation systems is not the responsibility of the Applicant.
41	Outlook from access road. The planned route of the PMA is less than picturesque with the route passing by various constructions in poor repair and a large car park covered in road planning's.	1. The Applicant has not assessed the visual effects on users of the PMA as, with the exception of the point at which the PMA accesses the properties at Capri Lodge and Northgate Farm, views of the Scheme during construction and operation would not arise. As has previously been stated in response to point 2 of the Applicant's Response to Written Representations [REP3-026] and Reference 6/2 of Table 1-7 - Mark Hawes - Deadline 4 Submission - Comments on responses submitted for Deadline 3 - Part 1 responded to in the Applicant's Response to Deadline 4 Submissions [REP5-029], the assessment of visual effects considers the effects on the occupants of the dwelling.
Transport		
42	Lost Bus Service. Having a regular bus service directly outside the property is a significant benefit to the property and has been well used over the years.	1. The Applicant has acknowledged in response 5A and B in the Applicant's Response to Deadline 4 Submissions [REP5-029] that there will be an adverse impact on residents at Warreners House (including residents at Northgate) due to the loss of the bus stop in this location. This forms part of the population and

Ref. No.	Response:	Applicant's Response:
		human health assessment for the Scheme, as detailed at paragraph 12.10.15 and 12.10.18 of Chapter 12: Population and Human Health Part A [APP-054].
43	Alternative Bus service not viable. In order to catch the X15 service to Newcastle it will be necessary to walk 2k to nearest bus stop. This will add at least 1 hour to a return journey. However, the prospect of anyone from my family walking across unlit fields to catch a bus service in the winter is a nonstarter given the obvious safety concerns.	1. The Applicant has acknowledged in response 5A and B in the Applicant's Response to Deadline 4 Submissions [REP5-029] that there will be an adverse impact on residents at Warreners House (including residents at Northgate) due to the loss of the bus stop in this location. This forms part of the population and human health assessment for the Scheme, as detailed at paragraph 12.10.15 and 12.10.18 of Chapter 12: Population and Human Health Part A [APP-054].
44	Footpath. For the last 25 years we have regularly used the council-maintained footpath through the woodlands directly west of the property. The removal of the footpath and the widening leaves the property land locked with no option to venture west of the property.	1. The Applicant maintains the response to point 3C of the Applicant's Response to Written Representations [REP3-026] and has confirmed in point 1 of Follow-up response to deadline 3 comments from the Applicant – Reference 3C in the Applicant's Response to Deadline 4 Submissions [REP5-029] that there is no designated footpath at this location, there are no existing safe crossings of the A1 in this vicinity, and the Applicant does not agree that the property will be land locked.
45	Car sharing. In living alongside the A1 we are ideally positioned to take advantage of car sharing with friends who live further north. This will no longer be an option in the future.	1. The Applicant has not previously been made aware of any car sharing schemes which would be affected by the Scheme and the Scheme does not preclude car sharing. 2. The Applicant has provided a response in relation to the closure of the direct access to the Property from the A1 at items 2 and 4, above.
46	Bridleway Access. The plans currently do not include provision to preserve the existing bridleway access from the woodland to the stream.	1. A new section of bridleway would be provided, extending on from Bridleway 407/010, which would tie into the road network north of Morpeth at West View. This is also shown on Sheet 1 of the Rights of Way and Access Plans [REP6-006] and was acknowledged to Mr Hawes in 5.6 of the Applicant's Response to Written Representations [REP3-026]. 2. As shown on Figure 1 of Appendix D Warreners Private Means of Access submitted as part of the Applicant's Written Summary of Oral Submissions at Hearings [REP4-029], the plan of the proposed PMA includes 0.5m verges on both sides that can be used by walkers accessing the woodland north of the stream.
Landscape and Visual		
The proposed plans negatively impact the visual effect from all parts of the property, which include:		
47	View of the new PMA. The new access road approaches from the south of the property replacing the rolling fields outlook. It then wraps around the eastern hedgerow boundary of the property, before heading west across the north eastern corner of our property. As such the access road will dominate (and block views of countryside) the south, east and north outlook when viewed from all points of the garden.	1. The Applicant maintains the response to Reference 1C/2 of Table 1-7 - Mark Hawes - Deadline 4 Submission - Comments on responses submitted for Deadline 3 - Part 1 responded to in the Applicant's Response to Deadline 4 Submissions [REP5-029]. Awareness of the PMA would be substantially mitigated once the hedgerow is established, and the views of the PMA from within the garden space would be substantially screened.
48	View of widened A1 and traffic. The widened A1 will be visible from the majority of the property including the house, the garden, the approach road to the property and point of access to the property.	1. The Applicant maintains the response to point 1/C in Table 1-6 – Mark Hawes of the Applicant's Response to Written Representations [REP3-026] with reference to the outlook from the property. As has also previously been stated in response to point 2 of the Applicant's Response to Written Representations [REP3-026] and Reference 6/2 of Table 1-7 - Mark Hawes - Deadline 4 Submission - Comments on responses submitted for Deadline 3 - Part 1 responded to in the Applicant's

Ref. No.	Response:	Applicant's Response:
		Response to Deadline 4 Submissions [REP5-029], the assessment of visual effects considers the effects on the occupants of the dwelling.
49	View of Layby and stationary HGV. The layby and stationary vehicles will be visible from the majority of the property including the garden, the approach road to the property and point of access to the property.	1. With reference to views of the proposed layby and HGVs using it, the Applicant has responded to this point at Item 14, above.
50	View of Coronation trees. The pleasant outlook over the tree lined Coronation avenue will be lost along with hedgerow.	1. The Applicant maintains the response to point 2/D in Table 1-6 – Mark Hawes of the Applicant's Response to Written Representations [REP3-026] and Reference 2D/3 of Table 1-7 - Mark Hawes - Deadline 4 Submission - Comments on responses submitted for Deadline 3 - Part 1 responded to in the Applicant's Response to Deadline 4 Submissions [REP5-029] with reference to the removal and replacement of existing roadside trees that form the southern limits of the Coronation Avenue.
51	View of Character cottage. The westerly view of Northgate cottage will be replaced by the Swale access road. This also includes the felling of a number of trees in the woodland.	1. The Applicant maintains the response to Reference 3B/1 of Table 1-7 - Mark Hawes - Deadline 4 Submission - Comments on responses submitted for Deadline 3 - Part 1 responded to in the Applicant's Response to Deadline 4 Submissions [REP5-029] with reference to the removal of North Gate House. The Applicant also maintains the response to point 3A of the Applicant's Response to Written Representations [REP3-026] and Reference 3F/1c and 3/3 of Table 1-7 - Mark Hawes - Deadline 4 Submission - Comments on responses submitted for Deadline 3 - Part 1 responded to in the Applicant's Response to Deadline 4 Submissions [REP5-029] with respect to the loss and replacement of associated trees.
52	View of Noise Barrier. Although the partial noise barrier may assist noise it will not be pleasant to view. The noise barrier will be clearly visible from the house, the front and rear garden a	<ol style="list-style-type: none"> 1. It appears that text is missing from this comment. 2. The response in item 2/1 of the Applicant's Responses to Written Representations [REP3-026] identified that a combination of retained vegetation and the proposed noise barrier would provide visual screening of the Scheme. This would include the north facing elevation of the dwelling and immediate external spaces, including views to the west from the existing access point. 3. A detailed response is provided at item 71, below.
53	Access road to the woods at the north. The access road providing access to the woods at the North will be visible from most of the garden.	1. The Applicant has provided a response in relation to the access road at item 22, above.
54	View of Soil dump. During construction the soil dump will block views of countryside.	1. The Applicant has provided a response in relation to the temporary soil storage area at item 25, above.
Noise and Vibration		
55	Increase in noise levels. The increase in traffic travelling at higher speeds will significantly increase noise levels in the household and garden. The Applicant recognises that the increased traffic and speeds, (at opening) will raise the level of noise above Significant Observed Adverse Effect (SOAEL) safe levels. In comparing the noise levels between a dual carriageway and the current single carriageway it is very noticeable how much noisier the dual is compared to the single carriage.	<ol style="list-style-type: none"> 1. Points raised in relation to the predicted noise levels with and without the Scheme at Northgate Farm have been addressed by the Applicant previously within Ref No. 7 row 3 (on page 81) of Table 1-8 within Applicant's Response to Deadline 4 Submissions [REP5-029] which in relation to this point stated: <i>"1. With regard to the absolute noise levels predicted at the building, in the opening year (2024), without Scheme scenario, noise levels are predicted to exceed the significant observed adverse effect level (SOAEL) on one façade during both the daytime and night-time (albeit only marginally).</i> 2. <i>In the opening year, with Scheme scenario with the proposed noise barrier (PNB1) in place, noise levels at the building are predicted to exceed the SOAEL on one façade</i>

Ref. No.	Response:	Applicant's Response:
		<p>during the night-time only and to a slightly lesser extent than in the opening year without Scheme scenario.</p> <p>3. In terms of noise level changes as a result of the Scheme, including the attenuation afforded by PNB1, a decrease in the representative noise level is predicted at the Northgate Farm building during the daytime and night-time, resulting in a beneficial impact in the short-term."</p>
56	<p>Impact upon the garden. The Applicant does not provide any indication of the adverse noise impact within the garden area where we spend most of leisure time. For example, the point of access to the property will be circa 20 metres from the dual carriageway and totally exposed to the road and increased noise.</p>	<p>1. Points raised in relation to noise within the Northgate Farm garden area have been addressed by the Applicant previously within Ref No. 7 row 1 (on page 80) of Table 1-8 within Applicant's Response to Deadline 4 Submissions [REP5-029] which in relation to this point stated:</p> <p>"1. The operational stage noise assessment presented in the Noise Addendum [REP1-041] (sic this reference should read [REP1-019]) is based on guidance contained within DMRB LA 111 Noise and Vibration as agreed with NCC in the SoCG [REP4-016] (and as submitted at Deadline 5). DMRB LA 111 requires that noise level changes are predicted at noise-sensitive buildings.</p> <p>2. It should be noted that, as shown on Figure 4. Short-term Noise Level Change – Part A, within Noise Addendum Appendix D Part 1 [REP1-021], the noise level changes in the garden of the property are of no greater than minor magnitude of impact based on the magnitude of impact scale presented in DMRB LA 111. As expected, at greater set back distances from the A1 carriageway the absolute noise levels within the garden will decrease, but road traffic will remain the dominant noise source."</p>
57	<p>Impact on quiet periods. There will be a greater level of long-distance travel which is less constrained by peak hours. As such it is likely that the most noticeable increase in traffic (and noise) will be in the periods outside of peak hours, particularly the early evening period. This is where we will notice the noise increase the most as the current levels of traffic at this time are very low. Unfortunately, it is when we enjoy using the garden the most.</p>	<p>1. Points raised in relation to noise levels during different periods has been addressed by the Applicant previously within Ref No. 7C row 1 (on page 83) of Table 1-8 within Applicant's Response to Deadline 4 Submissions [REP5-029] which in relation to this point stated:</p> <p>"1. Detailed traffic modelling of the changes in traffic flows and patterns has been undertaken and is documented in Chapter 4 of the Case for the Scheme [APP_344]. This traffic modelling has been undertaken in accordance with DfT WebTAG guidance, with a focus on weekday peak period flows which will be the busiest time periods. The traffic model forecasts indicate there will be a reassignment of traffic from parallel routes including the A697 and the de-trunked A1 onto the Scheme, comprising a mix of local and regional traffic rather than very long distance trips which tend to favour routes to the west such as the M6.</p> <p>2. As stated previously in point 2 of Ref. 7C of the Applicant's Responses to Written Representations [REP3-026] the time periods used for the operational road traffic noise assessment (06:00 – 00:00 hours and 23:00 – 07:00 hours) are in accordance with guidance contained with DMRB LA 111.</p> <p>3. The operational stage noise assessment presented within the Noise Addendum [REP1-019] is therefore robust and in line with appropriate guidance including the different time periods considered."</p>

Ref. No.	Response:	Applicant's Response:
58	<p>Noise levels increase with age of road. It is recognised that it is necessary to regularly resurface the road to minimise the noise impact. Unfortunately, I am not confident that this will happen as suggested. The stretch of the A1 south of this scheme has not been resurfaced in the last 25 years and is heavily pitted and worn.</p>	<ol style="list-style-type: none"> 1. Points in relation to the resurfacing of the Scheme have been addressed by the Applicant previously within Ref No. 7 row 2 (on page 81) of Table 1-8 within Applicant's Response to Deadline 4 Submissions [REP5-029] which stated: "1. The Outline CEMP [REP4-013 and 014] (and as updated at Deadline 5) include the commitment (in Table 3-2 row A-N1) that the entire length of the A1 (apart from structures) will be laid with a low noise surface (LNS) as part of the Scheme. Bullet point 'b' of this row states: "All existing sections of LNS on the A1 will be replaced with a new LNS (and if necessary, replaced again by the future year such that they can be considered to be well maintained)." 2. With regard to the resurfacing of the road, paragraph 5.2.5 of the Outline CEMP [REP4-013 and 014] (and as updated at Deadline 5) states that: "In the longer term, expected planned maintenance will include activities such as resurfacing the road and replacement of assets when they become life expired." 3. Requirement 4 of Schedule 2 to the dDCO [REP2-004 and 005] requires the Scheme to be constructed in accordance with the CEMP approved by the Secretary of State, which must be based on the Outline CEMP [REP4-013 and 014] (and as updated at Deadline 5). Further, paragraphs 4 to 6 of Requirement 4 require a HEMP to be developed by the end of the construction, addressing matters in the CEMP relevant to operation and maintenance. The Scheme must then be operated and maintained in accordance with the HEMP. 4. As such, the maintenance requirements set out in the Outline CEMP [REP4-013 and 014] (and as updated at Deadline 5) are secured. Pursuant to section 161(1)(b) of the Planning Act 2008, a breach of the terms of this requirement would constitute a criminal offence. This should provide Mr Hawes with reassurance that the Applicant will meet its maintenance obligations, as set out in the Outline CEMP [REP4-013 and 014] (and as updated at Deadline 5)."
59	<p>Partial Noise barrier. It is disappointing to be learn that there is no scope to extend the barrier to the full extent of my boundary leaving the majority of the property exposed to a significant increase in road traffic volume. This will be particularly noticeable at the point of entry to the property which will be totally exposed to the new carriageway. The constraints on the barrier length leaves the majority of the north facing aspect of the house fully open to the new dual carriageway. This includes 11 windows (8 on the upper tier) which have a direct line of sight to the new carriageway with negligible benefit from the noise barrier. Furthermore, the barrier offers no benefit to those parts of the garden that we spend most of our time and enjoy the most.</p>	<ol style="list-style-type: none"> 1. Points in relation to the noise barrier have been addressed by the Applicant previously within Ref No. 2 (on page 12) of Table 1-4 within Applicant's Comments on Responses to Further Written Questions [REP6-043] which stated: "1. The operational stage noise assessment presented in the Noise Addendum [REP1-019] is based on guidance contained within DMRB LA 111 Noise and vibration which requires that noise level changes are predicted at noise-sensitive buildings. 2. Noise level predictions were undertaken at upper floor level (4m above ground) at a number of locations around the building, including on the northern façade. 3. The proposed barrier has been designed to mitigate noise levels at Northgate Farm such that the operational road traffic noise effect at this property would not be significant. The proposed barrier provides a meaningful noise benefit, mitigates the significant adverse effect and is also value for money, therefore an extension is unnecessary. 4. With respect to garden areas, it should be noted that, as shown on Figure 4: Short-term Noise Level Change – Part A within Noise Addendum Appendix D Part 1 [REP1-021], the noise level changes in the garden of the property are predicted to be of no greater than minor magnitude of impact based on the magnitude of impact scale presented in DMRB LA 111. As expected, at greater set back distances from the A1

Ref. No.	Response:	Applicant's Response:
		<i>carriageway, the absolute noise levels within the garden will decrease, and be at lower levels than those predicted at the building."</i>
60	Soil Depot Noise. The close proximity of the soil store and the limited noise mitigation measures, will mean HGV vehicles accessing the soil store will increase noise levels during construction.	1. This query has been addressed in Row 24 of this Table.
61	No vibration analysis. The Applicant response states, "Operational vibration is scoped out of the assessment methodology as a maintained road surface will be free of irregularities as part of project design and under general maintenance, so operational vibration will not have the potential to lead to significant adverse effects." In living at the property, it is very noticeable when large vehicles pass the property at fast speeds the house does vibrate. As this is not frequent it is something that we can tolerate. With increased speeds and HGV traffic we believe that this will become a common occurrence, taking the issue above any reasonable tolerance levels. Given the track record in maintaining other stretches of the A1 we have very low confidence that the road will remain free of irregularities.	<p>1. Points in relation to operational vibration have been addressed by the Applicant previously within Ref No. 7G row 1 (on page 85) of Table 1-8 within Applicant's Response to Deadline 4 Submissions [REP5-029] which stated: <i>"1. Due to the widening of the A1 carriageways as part of the Scheme adjacent to Northgate Farm, a proportion of the vehicles using the A1 will pass Northgate Farm at a greater distance than is currently the case. Furthermore, the road will be resurfaced as part of the Scheme and will be free from irregularities. Therefore, in accordance with DMRB LA111 section 1, operational vibration is not expected to have the potential to lead to significant adverse effects, it has therefore not been considered necessary to undertake an assessment of operational vibration."</i></p> <p>2. Points in relation to the resurfacing of the Scheme have been addressed in row 58 of this table.</p>
Air quality		
62	Degradation in air quality. In reporting on air quality, the Applicant is very focused on demonstrating that government threshold limits will be achieved and appears to have neglected the human element here. As recognised by the Highways England own on-line literature, increased traffic travelling at faster speeds will result in a degradation in air quality. Any degradation in air quality could have a direct impact upon my family's health.	<p>1. This point associated with degradation in air quality has been addressed by the Applicant previously within Ref No. 9 row 1 (on page 86) of Table 1-7 within Applicant's Response to Deadline 4 Submissions [REP5-029] which in relation to this point stated: <i>"2. The assessment of the effects of changes to air quality on Human health (as well as ecological health) underpins the air quality assessment undertaken in Chapter 5: Air Quality Part A [APP-040] and Part B [APP-041]. The assessment assesses the Scheme's ability to affect compliance with the air quality standards – in particular, the annual mean standard for NO₂ of 40µg/m³.</i> <i>This standard is set for the protection of human health on the basis of epidemiological studies. In addition, the locations of modelled receptors used to determine compliance with the standards have all been chosen to represent worst-case human exposure to pollutants. In particular, R009 is representative of modelled pollutant concentrations at Mr Hawes' property.</i></p> <p>3. It is unclear what Highways England literature is being referred to in the response, as no reference is given. However, as a general point, it is incorrect to state that increased traffic travelling at faster speeds will always result in a degradation to air quality. The impact of a change in traffic flows and speeds must be assessed on a case-by-case basis.</p> <p>4. The air quality assessment for Part A [APP-040], Part B [APP-041] and the cumulative Scheme [APP-330] was undertaken in line with Highways England guidance documents HA207/07 (and all associated Interim Advice Notes). Sensitivity Tests for Part A [APP-205], Part B [APP-275] and for a Scheme Opening Year of 2024 [REP3-012] have all been undertaken in line with the updated DMRB guidance document LA105. Whilst it is accepted that the Scheme would result in increases in pollutant concentrations arising</p>

Ref. No.	Response:	Applicant's Response:
		<p>from increased traffic flow along the A1 and changes to traffic speeds, the conclusion of the assessments and sensitivity tests outlined above was that the Scheme would not result in any exceedances of an air quality standard at any human receptor, and that there would subsequently be no significant air quality impact on human health.”</p>
63	<p>Accuracy of Analysis. Although I understand that it is standard industry practice to extrapolate the expected air quality from historical data, I am struggling to understand how an accurate forecast can be derived by such an approach given the wide range of different factors which have an impact upon air quality. Furthermore, there is no option for recourse should the forecast be wrong.</p>	<p>1. This point associated with degradation in air quality has been addressed by the Applicant previously within Ref No. 9 row 1 (on page 86) of Table 1-7 within Applicant's Response to Deadline 4 Submissions [REP5-029] which in relation to this point stated:</p> <p>“1. The Applicant provided the technical detail of the forecasting methods used in the air quality assessment in response to the comment set out in Reference 9 in the Applicant's Responses to Written Representations [REP3-026].”</p> <p>“5. Whilst it is recognised that uncertainty exists in the elements of the modelling undertaken within the air quality assessments, the Applicant has taken measures to ensure that the modelling undertaken to inform the air quality assessment is robust and appropriately conservative, and is consistent with monitored pollutant concentrations and trends. The technical detail of the measures taken to ensure a robust and appropriately conservative model are covered in the Applicant's response in Reference 9 in the Applicant's Responses to Written Representations [REP3-026] and have not be elaborated on any further here, but the Applicant's response to Reference 9E is reiterated:</p> <p>Given the projected future concentrations (well below the air quality standards), the risk that the forecast air quality impacts are incorrect to such a degree as would cause an exceedance of the air quality standards, or significantly increased risk of exceedance of the standards, is negligible. As such, no options for recourse are necessary for air quality.”</p>
64	<p>Access Road Fumes in the woodland. The access road will primarily be used by Northgate Farm and Capri Lodge. At the time of writing Capri Lodge has been split into 2 properties. In addition, the access road will be used by Robson farm, Northumbrian Water and various delivery services. Based upon current usage (even during lockdown) we are seeing over 20 journeys each day. We fully expect this to increase further when the access road is completed. With this level of traffic next to the woodland area there is no doubt that vehicle fumes will be noticeable.</p>	<p>1. This point associated with degradation in air quality as a result of the access road has been addressed by the Applicant previously within Ref No. 1F (on page 31) of Table 1-6 within Applicant's Response to Deadline 3 Submissions [REP3-026] which in relation to this point stated:</p> <p>“The volume of traffic that would use the private access road is well below the level that would warrant inclusion within the dispersion modelling of the operation impacts of the Scheme i.e. a change in flow of 1000 vehicle AADT. The dominant local sources of pollution for the property and surrounding land are the A1 to the west and, to a lesser extent, the A697 to the south-west.</p> <p>These roads and the impact of the Scheme on them have been fully evaluated in Chapter 5: Air Quality Part A [APP-040] and Part B [APP-041], Appendix 16.4 [APP-330]) and the assessment has demonstrated that no significant effects are likely as a result of the Scheme.”</p>
65	<p>Soil Deposit. The vehicles depositing the soil will add to air pollution during construction.</p>	<p>1. This point associated with degradation in air quality has been addressed by the Applicant previously within Ref No. 3 row 4 (on page 64) of Table 1-7 within Applicant's Response to Deadline 4 Submissions [REP5-029] which in relation to this point stated:</p>

Ref. No.	Response:	Applicant's Response:
		<p>“1. The construction dust assessment set out in Chapter 5: Air Quality Part A [APP-040] and Appendix 16.4: Air Quality Likely Significant Effects of the Scheme [APP-330] considers the impacts of construction activities at all receptors within 200m of the Scheme red line boundary. The assessment considers all potential construction activities associated with a major scheme, such as the Scheme in question, including the use of stockpiles. The receptors, including Mr Hawes’ property, are shown in Figure 5.4 Construction Receptors Part A [APP-078]. With the application of the recommended mitigation measures, which are set out within the Outline CEMP [REP4-013 and 014] (and as updated at Deadline 5), the conclusion of the construction dust assessment is that there would be no significant air quality effects resulting from the Scheme during construction.</p> <p>2. The construction traffic assessment set out in Appendix A of Appendix 16.4: Air Quality Likely Significant Effects of the Scheme [APP-330] considers the impact of construction traffic on pollutant concentrations at human receptors. The conclusion of this assessment was that pollutant concentrations remain would well below the relevant air quality standards, and that there would be no significant air quality effect as a result of construction of the Scheme, including at Mr Hawes’ property.”</p>
66	Construction Traffic. Will increase air pollution during the construction period.	<p>1. This point associated with degradation in air quality has been addressed by the Applicant previously within Ref No. 3 row 4 (on page 64) of Table 1-7 within Applicant’s Response to Deadline 4 Submissions [REP5-029] which in relation to this point stated:</p> <p>“1. The construction dust assessment set out in Chapter 5: Air Quality Part A [APP-040] and Appendix 16.4: Air Quality Likely Significant Effects of the Scheme [APP-330] considers the impacts of construction activities at all receptors within 200m of the Scheme red line boundary. The assessment considers all potential construction activities associated with a major scheme, such as the Scheme in question, including the use of stockpiles. The receptors, including Mr Hawes’ property, are shown in Figure 5.4 Construction Receptors Part A [APP-078]. With the application of the recommended mitigation measures, which are set out within the Outline CEMP [REP4-013 and 014] (and as updated at Deadline 5), the conclusion of the construction dust assessment is that there would be no significant air quality effects resulting from the Scheme during construction.</p> <p>2. The construction traffic assessment set out in Appendix A of Appendix 16.4: Air Quality Likely Significant Effects of the Scheme [APP-330] considers the impact of construction traffic on pollutant concentrations at human receptors. The conclusion of this assessment was that pollutant concentrations remain would well below the relevant air quality standards, and that there would be no significant air quality effect as a result of construction of the Scheme, including at Mr Hawes’ property.”</p>
Environmental Impact		
67	Loss of Trees. The proposed scheme includes plans to fell a large number of mature trees which directly impact upon our enjoyment of the property. These include:	1. The Applicant has responded to the detailed points raised by Mr Hawes at items 67A to 67G, below.

Ref. No.	Response:	Applicant's Response:
A	The coronation Trees	1. The Applicant has responded to the detailed points raised by Mr Hawes in relation to Coronation Avenue at item 50, above.
B	Trees to the west of the property to facilitate access to the Soil store	2. The Applicant has responded to the detailed points raised by Mr Hawes in relation to the trees to the west of the property at item 21, above.
C	Trees to the west of the property to accommodate a new access road for Swale maintenance	3. The Applicant has responded to the detailed points raised by Mr Hawes in relation to the trees to the west of the property at item 21, above.
D	Trees to the west of the property to facilitate Swale works.	4. The Applicant has responded to the detailed points raised by Mr Hawes in relation to the trees to the west of the property at item 21, above.
E	Possible trees at the front of the property to facilitate new access.	5. The Applicant has responded to the detailed points raised by Mr Hawes in relation to the trees at the front of the property at item 9, above.
F	Possible trees in the woodland to the east to facilitate the new access road.	6. The Applicant has responded to the detailed points raised by Mr Hawes in relation to the trees in the woodland to the east at item 1, above.
G	Trees to the south of the property to facilitate the PMA culvert.	7. The Applicant has responded to the detailed points raised by Mr Hawes in relation to the trees to the south of the property at item 1, above. These measures, including the avoidance of vegetation removal, would extend to the full length of the PMA, and include two trees approximately 170m to the south of the property's south-east boundary.
68	Loss of Hedgerow. The proposed scheme includes plans to remove hedgerow. This includes:	
H	Hedgerow on the western side of the current single carriageway.	1. The Applicant has previously responded to the points raised by Mr Hawes in relation to the removal of roadside hedgerows in Reference 2D/3, Table 1-7 - Mark Hawes - Deadline 4 Submission - Comments on responses submitted for Deadline 3 - Part 1, Applicant's Response to Deadline 4 Submissions [REP5-029].
I	Hedgerow in the woodland to the east of the property to facilitate the new access road.	2. The Applicant has responded to the detailed points raised by Mr Hawes at items 1, above. The impacts on the area referred to, including the impacted remnants of a hedgerow, will be mitigated with the provision of a boundary hedgerow, as indicated on Landscape Mitigation Masterplan Part A, Rev 3 [REP4-060].
69	Impact upon wildlife. The PMA access road and widening of the A1 will restrict some wildlife from the property.	1. The Applicant has provided a response in relation to wildlife crossing the PMA at item 4, above.
Miscellaneous		
70	Safety barrier. The increased traffic travelling at faster speeds increases the risk of vehicles veering off the road directly into our property. At this stage there are no plans to install safety barriers.	1. Provision of vehicle restraint system (safety barriers) along the mainline will be determined following a risk assessment in line with DMRB as part of the detailed design process, as secured by Requirement 3 of the dDCO [REP6-010 and 011]. The Order limits, as shown on the General Arrangement Plans [REP6-005] includes sufficient verge widths along the full length of the Scheme to install a vehicle restraint system where it is required. This was communicated to Mr Hawes on 17/03/2021 by the Applicant's principal contractor.
71	Visual Effect -Noise Barrier. It would appear that other properties which look out onto a noise barrier have been assigned a significant visual effects rating but this has not been recognised for Northgate Farm. Although the majority of the 70 metre barrier will be visible from the property this is not considered a significant visual effect.	1. The response in item 2/1 of the Applicant's Responses to Written Representations [REP3-026] identified that a combination of retained vegetation and the proposed noise barrier would provide screening of the Scheme. This would include the north facing elevation of the dwelling and immediate external spaces, including views to the west from the existing access point.

Ref. No.	Response:	Applicant's Response:
		<p>2. During ISH3, the Applicant provided oral submissions in relation to noise barrier PNB1 and the assessment of visual effects. These oral submissions, and the Applicant's post hearing notes, are recorded at items 5.2 to 5.7 of Table 1-1 of the Applicant's Written Summaries of Oral Submissions to Hearings [REP6-044] and are not reproduced in full here.</p> <p>3. The presence of a particular feature of the Scheme does not automatically generate a significant visual effect rating. Rather, in line with guidance provided in paragraph 1.17 of the Guidelines for Landscape and Visual Impact Assessment (3rd Edition) the assessment of visual effects carried out for the Scheme considers the visual effects as a whole - both adverse and beneficial.</p> <p>4. In the case of Northgate Farm, this included the fact that the proposed noise barrier would have the capacity to screen the Scheme and traffic movements to the west of the property. This would have the effect of reinforcing the capacity of the existing boundary vegetation to provide screening, particularly in summer months when the planting would be in leaf. The visual impact arising as a result of the presence of the noise barrier would also be offset by the retained vegetation in the foreground of the view from the northern elevation of the property. As detailed at Appendix 7.3 Residential Visual Effects Schedule Part A [APP-217], Receptor ref 98, the impacts of the Scheme as a whole in this location were therefore judged to be large adverse during construction, which (in line with the stated threshold in paragraph 7.4.61 of Chapter 7 Landscape and visual Part A [APP-044]) is significant, and slight adverse in winter year 1 and summer year 15, which (in line with the stated threshold in paragraph 7.4.61 of Chapter 7 Landscape and visual Part A [APP-044]) is not considered to be significant.</p>
72	Combined Effect. The impact on the scheme on the household is wide and far reaching. There is no recognition of this Combined impact in the DCO. The impact includes:	<p>1. The combined effects assessment is present in Chapter 15: Assessment of Combined Effects Part A [APP-060], Chapter 15: Assessment of Combined Effects Part B [APP-061] and, for the Scheme, in Chapter 16 Assessment of Cumulative Effects [APP-062]. This assessment has been informed by DMRB, Volume 11 Section 2, Part 5 and The Planning Inspectorate Advice Note Seventeen - Cumulative Effects Assessment, with consideration of DMRB LA 104.</p> <p>2. As detailed at item 8.2 of Table 1-2 of the Applicant's Written Summaries of Oral Submissions to Hearings [REP6-044], a Combined Effects Technical Note (Document Reference: 7.26.3) has been prepared to set out the combined effects on individual receptors. This technical note has been submitted at Deadline 7 and includes further detail as to the combined effects at Northgate Farm. This information is reproduced below. The combined effects assessment reports the residual effects already presented in: Chapter 5 Air Quality Part A [APP-040]; Chapter 6 Noise and Vibration Part A [APP-042]; Chapter 7 Landscape and Visual Part A [APP-044]; and</p>
A	Visual effect	
B	Additional Noise	
C	Impact of vibration	
D	Degradation of Air Quality	
E	Impact upon the environment – particularly loss of trees	
F	Loss of public transport	
G	Loss of unfettered access from a Public highway	
H	Land locked to the west of the property	

Ref. No.	Response:	Applicant's Response:
1	Impact on wildlife of the PMA access road and widening of the A1.	<p>Chapter 12 Population and Human Health Part A [APP-054].</p> <p><u>Construction – combined effects for Northgate Farm</u></p> <ol style="list-style-type: none"> 3. Table 2-2 of the Combined Effects Technical Note (Document Reference: 7.26.3) shows that, during construction, there would be a large adverse (Significant) effect on changes to views, a slight adverse (not significant) effect on human health and disruption to access to residential properties during construction, which would have a combined effect on residents of Northgate Farm of no worse than large adverse (Significant). 4. Residents, including at Northgate Farm, within 200m of Part A would experience no residual effects after mitigation (not significant) for air quality as well as noise and vibration during construction. 5. Changes to public transport has been assessed at a community level and, therefore, has not been included in the combined effects assessment for residential receptors. 6. The combined effects of the Scheme on wildlife have been assessed separately in the Combined Effects Technical Note (Document Reference: 7.26.3) under Statutory and Non-Statutory Designated Ecological Sites. This is because the assessment focuses on the combined effect on ecological receptors rather than residential receptors. 7. The overall combined effects for Northgate Farm would therefore be of no worse than large adverse (Significant) during construction. <p><u>Operation – combined effects for Northgate Farm</u></p> <ol style="list-style-type: none"> 8. As set out in Table 2-3 of the Combined Effects Technical Note (Document Reference: 7.26.3), during operation residents at Northgate Farm would have a slight adverse (not significant) effect from changes to views, and a slight beneficial (not significant) effect from changes to access to residential properties. 9. During operation, residents at Northgate Farm would experience an increase in annual mean concentrations of NO₂ and PM₁₀ but this would not result in residual effects after mitigation (not significant). There would also be no significant adverse noise effects, with the proposed noise barrier. 10. Changes to public transport have been assessed at a community level and, therefore, has not been included in the combined effects assessment for residential receptors. 11. The combined effects of the Scheme on wildlife have been assessed separately in the Combined Effects Technical Note (Document Reference: 7.26.3) under Statutory and Non-Statutory Designated Ecological Sites. This is because the assessment focuses on the combined effect on ecological receptors rather than residential receptors. 12. The overall combined effects for Northgate Farm would therefore be no worse than slight beneficial (not significant) to slight adverse (not significant) during operation.
73	Cumulative Effect. There is no recognition of the cumulative effect upon Northgate Farm of the Morpeth Northerly bypass scheme and the current A1 dual scheme. The Morpeth bypass had a number of direct	<ol style="list-style-type: none"> 1. It is assumed that by Northerly Bypass Mr Hawes is referring to the Morpeth Northern Bypass. The Morpeth Northern Bypass scheme has already been constructed and is in operation. As the Morpeth Northern Bypass is already operational it would form part of the existing environment (i.e. baseline conditions)

Ref. No.	Response:	Applicant's Response:
	impacts upon the property. This included the placement of a very large road sign outside of the property adding to the detrimental visual effect.	for the environmental impact assessment for the Scheme. The environmental impact assessment assesses change from the existing environment (baseline) with the proposed Scheme in place. As such, the Morpeth Northern Bypass scheme does not form part of the cumulative assessment for the Scheme. Rather, it informs the baseline against which the Scheme is assessed.

Table 1-4 – Mark Hawes Written Summary

Ref. No.	Response:	Applicant's Response:
This document forms part of Deadline 6 submission in providing a written summary to the hearings held week commencing 19th April 2021		
Wednesday, 21st April 2021 – Issue Specific Hearing 3		
1	In the Issue Specific hearing 2 responded to the possibility of an unaccompanied site visit to Northgate Farm. Although I understand that, on behalf of the Applicant, did not have any objections to the visit, he did caveat it, by suggesting that Northgate Farm was the only property from the Warreners group that had raised concerns with the PMA access road.	<ol style="list-style-type: none"> To date, Mr Hawes has been the only resident of the Warreners group that has submitted a representation to the Examining Authority as part of this DCO Examination.
2	From our understanding this statement is not accurate. There are only three properties from the Warreners group which are impacted by the PMA access road leading to Northgate Farm. They include Warreners House, Capri Lodge and Northgate Farm. All three properties have expressed concerns relating to this specific road in the past, albeit, not through the Examination process. As highlighted in the Compulsory Acquisition Hearing 2 the Applicant has a meeting planned with the owners of Capri Lodge to directly address concerns with the access road. The current owners have communicated directly to us that they will not accept any shared use of the access road over their property. Unfortunately, this stance is a serious concern and one that threatens the viability of the PMA.	<ol style="list-style-type: none"> There are seven property owners within the Warreners group who will have their existing direct access onto the A1 closed on the grounds of safety and replaced with a private means of access (PMA) from West View, to the south, to provide access to all properties throughout construction and operation. The Scheme will require temporary land take and permanent rights from the three named residential and one agricultural landowner in order to construct the PMA. The Applicant has consulted with all affected landowners, including those referred to by Mr Hawes. A meeting was held with the residents of Warreners House on 10/02/2021 to discuss access and accommodation works with no significant issues raised; the compulsory acquisition claim is being finalised. The Applicant confirmed in point 2 of Reference 4 on page 70 of the Applicant's Response to Deadline 4 Submissions [REP5-029] that the new owner of Capri Lodge initially stated that the proposed access route/location was acceptable, but now wishes to avoid a shared access situation, although they support of the closure of the existing direct A1 access. Discussions to achieve this are ongoing with both Mr Hawes and the new owner of Capri Lodge, with whom the next meeting is due to be held in the week commencing 10/05/2021. However, in the absence of an agreed solution, should powers be granted over the relevant land required for the PMA, it is not possible to prevent the exercise of rights granted to the Applicant and then passed to another party – they become legal rights.

Ref. No.	Response:	Applicant's Response:
Thursday, 22nd April 2021 – Issue Specific Hearing 3		
Agenda: Landscape and Visual Impacts		
1	<p>As part of Landscape and Visual Impacts agenda item highlighted a concern relating to the visual effect of the planned noise barrier. It would appear that other properties which look out onto a noise barrier have been assigned a significant visual effects rating, but this has not been recognised for Northgate Farm. The Applicant was asked to explain if this was case and why. I do not believe that an answer was provided in the hearing. I would very much welcome a written answer, from the Applicant, to this question.</p>	<ol style="list-style-type: none"> 1. During ISH3, the Applicant provided oral submissions in relation to noise barrier PNB1 and the assessment of visual effects. These oral submissions, and the Applicant's post hearing notes, are recorded at items 5.2 to 5.7 of Table 1-1 of the Applicant's Written Summaries of Oral Submissions to Hearings [REP6-044] and are not reproduced in full here. 2. The presence of a particular feature of the Scheme does not automatically generate a significant visual effect rating. Rather, in line with guidance provided in paragraph 1.17 of the Guidelines for Landscape and Visual Impact Assessment (3rd Edition) the assessment of visual effects carried out for the Scheme considers the visual effects as a whole - both adverse and beneficial. 3. In the case of Northgate Farm, this included the fact that the proposed noise barrier would have the capacity to screen the Scheme and traffic movements to the west of the property. This would have the effect of reinforcing the capacity of the existing boundary vegetation to provide screening, particularly in summer months when the planting would be in leaf. The visual impact arising as a result of the presence of the noise barrier would also be offset by the retained vegetation in the foreground of the view from the northern elevation of the property. Additional planting is also provided for, to the east of the Scheme, extending northwards and comprising a hedgerow with trees to replace those removed within the Coronation Avenue, refer to Landscape Mitigation Masterplan Part A Rev 3 [REP4-060]. As detailed in Appendix 7.3 Residential Visual Effects Schedule Part A [APP-217], Receptor ref 98, the impacts of the Scheme as a whole in this location were therefore judged to be large adverse during construction, which (in line with the stated threshold in paragraph 7.4.61 of Chapter 7 Landscape and visual Part A [APP-044]) is significant, and slight adverse in winter year 1 and summer year 15, which (in line with the stated threshold in paragraph 7.4.61 of Chapter 7 Landscape and visual Part A [APP-044]) is not considered to be significant.
Combined and Cumulative Effects		
1	<p>As part of Landscape and Visual Impacts agenda item it was acknowledged by the Applicant that the combined effect had been documented on a resident group basis (see table 15.4 of Chapter 15 of the EA [APP-060]) rather than on an individual property basis. An action was taken to provide further detail on individual properties. On a similar theme we would welcome further details on how the Applicant has measured the Cumulative effects as there does not appear to be any detail on the cumulative impact of the Morpeth Northern bypass scheme.</p>	<ol style="list-style-type: none"> 1. As detailed at item 8.2 of Table 1-2 of the Applicant's Written Summaries of Oral Submissions to Hearings [REP6-044], a Combined Effects Technical Note (Document Reference: 7.26.3) has been prepared to set out the combined effects on individual receptors. This technical note has been submitted at Deadline 7 and includes further detail as to the combined effects at Northgate Farm. The combined effects assessment reports the residual effects already presented in: <ul style="list-style-type: none"> • Chapter 5 Air Quality Part A [APP-040];

Ref. No.	Response:	Applicant's Response:
		<ul style="list-style-type: none"> • Chapter 6 Noise and Vibration Part A [APP-042]; • Chapter 7 Landscape and Visual Part A [APP-044]; and • Chapter 12 Population and Human Health Part A [APP-054]. <p>• The relevant information in respect of Northgate Farm has been summarised at item 2, below.</p> <p>2. The Morpeth Northern Bypass scheme has already been constructed and is in operation. As the Morpeth Northern Bypass is already operational it would form part of the existing environment (i.e. baseline conditions) for the environmental impact assessment for the Scheme. The environmental impact assessment assesses change from the existing environment (baseline) with the proposed Scheme in place. As such, the Morpeth Northern Bypass scheme does not form part of the cumulative assessment for the Scheme. Rather, it informs the baseline against which the Scheme is assessed.</p>
2	<p>In addition, highlighted his ongoing frustration that the wide-reaching impact of the scheme on Northgate Farm had not been recognised by the Applicant and speculated that the group approach to measuring Combined effect was partially to explain for this. He then went onto to highlight that if he was playing Combined effect bingo, he would be doing very well with all squares ticked off.</p>	<p>1. The combined effects assessment is presented in Chapter 15: Assessment of Combined Effects Part A [APP-060], Chapter 15: Assessment of Combined Effects Part B [APP-061] and, for the Scheme, in Chapter 16 Assessment of Cumulative Effects [APP-062]. This assessment has been informed by DMRB, Volume 11 Section 2, Part 5 and The Planning Inspectorate Advice Note Seventeen - Cumulative Effects Assessment, with consideration of DMRB LA 104.</p> <p>2. As detailed at item 8.2 of Table 1-2 of the Applicant's Written Summaries of Oral Submissions to Hearings [REP6-044], a Combined Effects Technical Note (Document Reference: 7.26.3) has been prepared to set out the combined effects on individual receptors. This technical note has been submitted at Deadline 7, and includes further detail as to the combined effects at Northgate Farm. This information is reproduced below. The combined effects assessment reports the residual effects already presented in:</p> <ul style="list-style-type: none"> • Chapter 5 Air Quality Part A [APP-040]; • Chapter 6 Noise and Vibration Part A [APP-042]; • Chapter 7 Landscape and Visual Part A [APP-044]; and • Chapter 12 Population and Human Health Part A [APP-054]. <p><u>Construction – combined effects for Northgate Farm</u></p> <p>3. Table 2-2 of the Combined Effects Technical Note (Document Reference: 7.26.3) shows that, during construction, there would be a large adverse (Significant) effect</p>

Ref. No.	Response:	Applicant's Response:
		<p>on changes to views, a slight adverse (not significant) effect on human health and disruption to access to residential properties during construction, which would have a combined effect on residents of Northgate Farm of no worse than large adverse (Significant).</p> <ol style="list-style-type: none"> 4. Residents, including at Northgate Farm, within 200m of Part A would experience no residual effects after mitigation (not significant) for air quality as well as noise and vibration during construction. 5. Changes to public transport has been assessed at a community level and, therefore, has not been included in the combined effects assessment for residential receptors. 6. The combined effects of the Scheme on wildlife have been assessed separately in the Combined Effects Technical Note (Document Reference: 7.26.3) under Statutory and Non-Statutory Designated Ecological Sites. This is because the assessment focuses on the combined effect on ecological receptors rather than residential receptors. 7. The overall combined effects for Northgate Farm would therefore be of no worse than large adverse (Significant) during construction. <p><u>Operation – combined effects for Northgate Farm</u></p> <ol style="list-style-type: none"> 8. As set out in Table 2-3 of the Combined Effects Technical Note (Document Reference: 7.26.3), during operation residents at Northgate Farm would have a slight adverse (not significant) effect from changes to views, and a slight beneficial (not significant) effect from changes to access to residential properties. 9. During operation, residents at Northgate Farm would experience an increase in annual mean concentrations of NO₂ and PM₁₀ but this would not result in a residual effect after mitigation (not significant). There would also be no significant adverse noise effects, with the proposed noise barrier. 10. Changes to public transport has been assessed at a community level and, therefore, has not been included in the combined effects assessment for residential receptors. 11. The combined effects of the Scheme on wildlife have been assessed separately in the Combined Effects Technical Note (Document Reference: 7.26.3) under Statutory and Non-Statutory Designated Ecological Sites. This is because the assessment focuses on the combined effect on ecological receptors rather than residential receptors. 12. The overall combined effects for Northgate Farm would therefore be of no worse than slight beneficial (not significant) to slight adverse (not significant) during operation.

Ref. No.	Response:	Applicant's Response:
3	In response acknowledged the full house position but suggested that this was offset by mitigation provided.	<ol style="list-style-type: none"> 1. The Applicant disputes that it accepted that there was a "full house" of impacts at this property. It is also not accepted that the only mitigation that has been confirmed is the noise barrier. A response in respect of the visual impact assessment of PNB1 is provided above and is not repeated here. Furthermore, the Applicant is to provide a boundary hedgerow and trees to the northern and eastern boundaries to provide screening to the proposed PMA, in addition to the measures to avoid the removal of trees on the north-east boundary (as set out in Applicant's Written Summary of Oral Submissions at Hearings - Appendix D - Warreners Private Means of Access [REP4-029]). 2. As stated in item 8.4 of Table 1-2 of the Applicant's Written Summaries of Oral Submissions to Hearings [REP6-044], mitigation for each individual effect acting in combination is already provided as far as is reasonably practical within the topic in which it arises. For example, noise effects are already mitigated through the introduction of low noise surfacing and, where appropriate, noise barriers during operation. Similarly, during construction this is provided through compliance with the measures set out in measures S-N2 and S-N3 in the Outline CEMP [REP6-025 and 026] (and as updated at Deadline 6). 3. Table 1, Table 2 and Table 3 of Appendix GEN.4 Justification for Significant Residual Effects WQ GEN.1.35 [REP1-036] lists residual significant effects and associated mitigation. No further mitigation measures are feasible to reduce the residual significant cross topic combined effects anticipated, as explained in Appendix GEN.4 Justification for Significant Residual Effects WQ GEN.1.35 [REP1-036]. Mitigation measures are secured through the Outline CEMP [REP6-025 and 026] (and as updated at Deadline 7). 4. Due to the mitigation of individual effects on a topic by topic basis, the only remaining potential mitigation at the combined effects stage would be the timing of the construction operations, the availability of which is limited due to practical considerations. To use an example: during construction where a hypothetical receptor would be subject to combined effects of landscape, visual, noise and air quality (dust), the only additional mitigation in respect of the combined effect would be the timing of each operation causing the relevant individual effect. In this instance, vegetation would need to be removed to allow construction operations to take place (and removal is further constrained in timing by seasonal constraints relating to nesting birds) and noise and dust are generated by the same machinery. Therefore, no further mitigation can be offered through the staggering of construction tasks and the effect remains as assessed, individually and in combination.

Table 1-5 – Northumberland County Council – Deadline 6 Submission – Post Hearing Notes

Ref	Action Point	NCC Response	Applicant's Response
7	EA, Northumberland County Council (NCC) and Applicant to provide Position Statement in relation to the presence of Otters	We would defer to the EA although NCC recognise that otters are likely present on all watercourses in Northumberland as a general rule and would support the application of the precautionary principle in maintaining and improving connectivity across the road, which will be doubled or more in width. There is no disagreement with the process or survey methodology per se although note the general rule in ecology that lack of proof of presence is not proof of absence. Otter do not always leave spraint or other field signs and male otters have a range of up to 30km overnight.	<ol style="list-style-type: none"> 1. For clarity, otter was recorded along watercourses for Part A and appropriate mitigation has been proposed and secured in measures A-B2, A-B8, A-B10 and A-B17 of the Outline CEMP [REP6-025 and 026] (and as updated at Deadline 7). 2. As detailed in Appendix F Otter Position Statement to the Applicant's Written Summaries of Oral Submissions to Hearings [REP6-048], the Applicant has not received comments from Northumberland County Council (NCC) identifying disagreement with the methodology or conclusions in respect of assessment of otter, or the proposed mitigation measures, for Part A. As such, the position detailed below is exclusive to Part B and the position in relation to Part A is assumed to be agreed as set out in the Statement of Common Ground with NCC [REP6-030]. The response provided by NCC is understood by the Applicant to relate to Part B, where otters were concluded as "likely absent", as set out in Table 9-9 of Chapter 9: Biodiversity Part B [APP-049]. 3. As detailed in Appendix F Otter Position Statement [REP6-048], during Issue Specific Hearing (ISH) 3, NCC stated that they would usually assume presence of otter in their role as the local planning authority. The Applicant was not informed of this position in response to EIA scoping or prior to the submission of the application for the Scheme, and made an assessment of otter based on desk study records obtained from the local records centre (Environmental Records Information Centre (ERIC) North East) and surveys undertaken by the Applicant between 2016 and 2019. The Applicant was not made aware by NCC that in its view a precautionary approach should be taken. Similarly, Northumberland County Council does not have a published policy to the effect that otter should be assumed to be present and did not comment to this effect during scoping of the Environmental Impact Assessment for Part B (or, for completeness, Part A). 4. As detailed in Appendix F Otter Position Statement [REP6-048], "The Applicant's conclusion of likely absence is set out in full within Items 3 and 20-26, Table 1-4 of the Applicant's Response to Deadline 4 Submissions [REP5-029]. By way of summary, desk study records for Part B identified historic otter records, with the most recent record returned from 2015 approximately 1km to the east of the A1 carriageway. The most recent otter casualty on the A1 (within the Order limits of Part B) dates back to 2011. In addition to the desk study, otter field surveys for Part B were undertaken by experienced surveyors in accordance with best practice guidelines (Chanin, 2003)¹. Surveys were undertaken along watercourses spanning either side of the existing A1 carriageway in 2016, 2017, 2018 and 2019, with no evidence of otter activity or presence recorded along any watercourses or riparian habitat within the Order limits or survey area. Of the historic nature of the desk study results, the negative field survey results over a number of years and the presence of predominantly suboptimal habitats to support the species informed a "likely absent" classification for otter within the Part B Order limits." 5. Part B involves the widening of the road and therefore, in general, extension to culverts. This includes a number of culverts that, following extension, would continue to maintain connectivity beneath the improved road for mammal passage (including two cattle creeps along White House Burn and a Tributary of the Kitty Carter Burn, all of which provide ample space for mammal passage). 6. The Applicant notes that NCC does not disagree with the process or survey methodology. The Applicant agrees with the statement "lack of proof of presence is not proof of absence." The term "likely absence" is used by assessors as best practice when defining the presence of species for this reason. The Applicant acknowledges that otter do not

Ref	Action Point	NCC Response	Applicant's Response
		<p>It is considered that there is a credible risk of road casualties (with EA reporting additional records to those within an Environmental Records Information Centre North East (ERIC) increasing with the widening of the route</p> <p>In Part A we strongly support the inclusion of crossing protection and safe crossing points for wildlife and support that on Part B also. Monitoring immediately prior to or post-construction is not the preferred option as retro-fitting such features would be considered excessively costly and disruptive and may have significant impacts on delivery. Our preferred option would be to have such features included in design from the start of the programme, benefiting a range of wildlife as well as otters. The position on otters also relates to that for culverts as these are</p>	<p>always leave spraint or other field signs and that male otters have large homes ranges, although as the Applicant completed surveys over an extended period (2016 to 2019), it would be anticipated that some evidence would be observed if otter were present.</p> <p>7. Nevertheless, post-construction monitoring, measure B-B30 of the Outline CEMP [REP6-025 and 026] (and as updated at Deadline 7), was proposed at Deadline 5 in response to the Environment Agency's Deadline 4 submissions in respect of otter [REP4-076].</p> <p>8. As discussed on a call with NCC's Ecologist on 06 May 2021 and detailed within Appendix F Otter Position Statement [REP6-048], following ISH3, the Applicant held discussions with the Environment Agency on 23 and 30 April 2021 to explore the evidence for the presence of otter. Further possible evidence of otter adjacent to the study area for Part B was provided by the Environment Agency at the meeting on 30 April, and the Applicant is considering this and the potential need for fencing along Part B at key crossing locations.</p> <p>9. The Applicant is considering provisional ideas for fencing at four locations along Part B. The Applicant is actively engaging with the Environment Agency and Northumberland County Council on this matter and is making progress to seek a resolution with the Environment Agency. The Applicant is expecting to be in a position to provide a substantive update at Deadline 8.</p> <p>10. ¹ Chanin P (2003). Monitoring the Otter <i>Lutra lutra</i>. Conserving Natura 2000 Rivers Monitoring Series No. 10, English Nature, Peterborough</p> <p>11. As above, this statement is understood by the Applicant to relate to Part B.</p> <p>12. As the Applicant concluded likely absence of otter for Part B, no significant effect was identified as a result of the widening of the road. Further, Part B involves the widening of the road and therefore, in general, extension to culverts. This includes a number of culverts that, following extension, would retain the ability to offer free passage to wildlife (particularly mammals) except in times of flood. This includes two cattle creeps along White House Burn and a Tributary of the Kittycarter Burn which provide ample space for mammal passage).</p> <p>13. However, as discussed on a call with NCC's Ecologist on 06 May 2021 and detailed within Appendix F Otter Position [REP6-048], following ISH3, the Applicant held discussions with the Environment Agency on 23 and 30 April 2021 to explore the evidence for the presence of otter. Further possible evidence of otter adjacent to the study area for Part B was provided by the Environment Agency at the meeting on 30 April, and the Applicant is considering this and the potential provision of mammal fencing in Part B at key crossing locations, which would reduce the potential risk of road traffic mortalities of otter.</p> <p>14. The Applicant acknowledges that NCC supports the inclusion of crossing protection and safe crossing points for wildlife on Part A. The position in relation to Part B is detailed in the response above.</p> <p>15. Post-construction monitoring, measure B-B30 of the Outline CEMP [REP6-025 and 026] (and as updated at Deadline 7), was an additional measure proposed at Deadline 5 in response to the Environment Agency's Deadline 4 submissions in respect of otter [REP4-076].</p> <p>16. As discussed on a call with NCC's Ecologist on 06 May 2021 and detailed within Appendix F Otter Position Statement [REP6-048], following ISH3, the Applicant held</p>

Ref	Action Point	NCC Response	Applicant's Response
		<p>features for which good design is paramount to ensure otters can continue to commute throughout the area.</p> <p>Where present (noting some evidence in early surveys in the ES Appendix 9.3 at APP-300) water vole are under-reported in recent years, considered rare in the County, and where pre-construction updating surveys confirm presence suitable mitigation will be required. It is acceptable for this to be included in the Schedule of Requirements.</p>	<p>discussions with the Environment Agency on 23 and 30 April 2021 to explore the evidence for the presence of otter. Further possible evidence of otter adjacent to the study area for Part B was provided by the Environment Agency at the meeting on 30 April. The Applicant is considering this and the potential provision of fencing in Part B at key crossing locations (culverts) to guide otter (and other wildlife) into the safe crossing points beneath the road and maintain connectivity to commute through the area.</p> <p>17. This matter was discussed with NCC's Ecologist on 06 May 2021. The Applicant confirmed that, as detailed in paragraph 4.1.2 to 4.1.4 of Appendix 9.3 Otter and Water Vole Report Part B [APP-300], a survey undertaken in 2016 by the Applicant may have recorded potential water vole field signs along Part B. However, the field signs recorded were not conclusively attributed to water vole and field signs of mink were also recorded, indicating presence and activity of this species in the area. Presence of mink is a significant factor reducing the likelihood of water vole occurring. It is generally accepted that mink can eradicate a water vole population if present. Updated field surveys were undertaken in 2018 and 2019 [APP-300] and no evidence of water vole activity or presence was recorded.</p> <p>18. As detailed in Table 9-9 of Chapter 9: Biodiversity Part B [APP-049], "taking into consideration the potential (but unconfirmed) water vole field signs recorded during the 2016 surveys and the presence of mink (as confirmed through scat presence), water vole is considered likely absent from within Part B and Part B Survey Area."</p> <p>19. A pre-construction walkover survey for water vole will be undertaken as good practice, in accordance with measure B-B18 of the Outline CEMP [REP6-025 and 026] (and as updated at Deadline 7). Requirement 7, Schedule 2 of the Draft DCO [REP6-010 and 011] states that "following pre-construction survey work or at any time when carrying out the authorised development, a) a protected species is shown to be present, or where there is a reasonable likelihood of it being present ... the relevant parts of the relevant works must cease until a scheme of protection and mitigation measures has been submitted to and approved in writing by the Secretary of State."</p> <p>20. The Applicant has engaged with Northumberland County Council to request confirmation that they are satisfied with the existing Requirements within the Draft DCO [REP6-010 and 011]. Northumberland County Council's Ecologist confirmed that the Requirement "seems very reasonable." The response to this engagement has been captured within the draft statement of common ground issued at Deadline 7.</p>
8	NCC and Applicant to confirm position in relation to any further need to provide non-motorised user improvements.	The Council's position in relation to the need to provide for non-motorised users for the scheme has been set out in previous written submissions; the most recent being to Deadline 4 (REP4-074). This matter was discussed in depth in the last Hearing Session where points of disagreement in relation to the applicant's response submitted at Deadline 5 (REP5-029) were debated. It is clear that the basic position remains divergent on this matter between the applicant and NCC and therefore, unless the ExA require, we see no benefit in preparing a rebuttal to the technical comments made by the applicant if the basic principle is not agreed. We are willing to make suggested amendments to the key elements of the dDCO in relation to	<ol style="list-style-type: none"> 1. The Applicant's position remains as set out in Table 1-3 – Northumberland County Council - Any post-Hearing Notes Requested at the Hearings - Response to Point 36 [REP5-042]. As explained during ISH3 on 22 April 2021 and recorded in the Applicant's Written Summaries of Oral Submissions to Hearings [REP6-044], the Applicant's position is that the provision of facilities for non-motorised users is satisfactorily addressed by the Scheme in compliance with the NPSNN. As such, the Applicant does not propose to provide the additional facilities requested by Northumberland County Council. 2. Designated Funds working group with representatives from the Applicant and NCC had their first meeting in February 2021. The second session is arranged for 14th May 2021 to triage through the listing of potential projects and agree their viability.

Ref	Action Point	NCC Response	Applicant's Response
		ensuring future delivery of the suggested NMU route should the ExA consider this to be appropriate.	
9	NCC and EA to respond to the Applicant's approach to construction mitigation documents.	<p>We accept the Construction Environmental Management Plan (CEMP) as an outline document subject to further revision but defer to EA and NE especially regarding impacts on the River Coquet and Coquet Valley Woodlands SSSI.</p> <p>We would like to see a greater level of narrative added to the Outline CEMP in relation to the contents of a LEMP to be submitted at a later date. This should confirm the commitments that will be contained in the detailed LEMP and set out the philosophy and timings of the proposed LEMP measures.</p> <p>Subject to the receipt of these details in some form, we are content that an Outline LEMP is not required as part of the DCO application.</p>	<ol style="list-style-type: none"> 1. The Applicant notes that Northumberland County Council accepts that the Outline CEMP [REP6-025 and 026] submitted at Deadline 5 is agreed (subject to further revisions), as reflected in the SoCG with NCC. The Applicant is working with the Environment Agency and Natural England to ensure all appropriate measures are captured in the Outline CEMP [REP6-025 and 026] (and as updated at Deadline 7). 2. The Outline CEMP [REP6-025 and 026] was updated at Deadline 6 to provide narrative on how the CEMP and LEMP (if produced) would interact. Diagram 1-1 illustrates how the LEMP would align with the CEMP and HEMP. Diagram 1-2 shows the numerous other documents that might influence the LEMP. NCC's confirmation that they do not consider an Outline LEMP to be required during the course of the examination is welcomed.

Table 1-6 – Northumberland County Council - Responses to ExQ2

Ref	Action Point	NCC Response	Applicant's Response
Biodiversity & Habitats Regulation			
BIO2.4	The Applicant submitted an Updated Biodiversity Air Quality Assessment at D3 [REP3- 010]. NE is asked to comment on the report generally and particularly in respect of the impacts on the River Coquet and Coquet Valley Woodlands SSSI. Are NE's concerns resolved and if not, what are the consequences? NCC is also asked to comment on the findings of the report	<p>With regard to the Updated Biodiversity Air Quality DMRB Sensitivity Assessment [REP3-010] we would defer to NE who are the technical specialists.</p> <p>We understand that there is new guidance upcoming which would resolve the disparity between NE and HE on air quality impact assessment (SOCG REP5-016). The impact of increased traffic is likely to be offset by overall downward trends in vehicle emissions driven by cleaner technologies.</p> <p>The impact is likely to be localised in the vicinity of the new crossing on the R. Coquet and Coquet Valley Woodlands SSSI.</p>	<ol style="list-style-type: none"> 1. This is acknowledged by the Applicant, who remains engaged with Natural England regarding the air quality assessment on biodiversity. 2. At present, there is no new guidance in relation to the assessment of impacts of air quality on biodiversity. As such, LA 105 Air Quality remains the appropriate guidance to inform the assessment (as used for the Updated Biodiversity Air Quality DMRB Sensitivity Assessment [REP3-010]). 3. The Applicant agrees that the predicted downward trend in vehicle emissions driven by cleaner technologies would reduce the level of impact of the Scheme year on year. The Scheme delays rather than reverses the future predicted decreases in the road contribution to nitrogen deposition (paragraph 2.1.20, Updated Biodiversity Air Quality DMRB Sensitivity Assessment [REP3-010]). 4. For the River Coquet and Coquet Valley Woodlands SSSI, the assessment [REP3-010] in accordance with LA 105 Air Quality identified that there would not be a significant effect as a result of increased nitrogen deposition from vehicle emissions. However, the Applicant agrees that, in general, impacts (if any) as a result of increased nitrogen deposition are localised and adjacent to the affected roads.

	<p>In advance of new agreed national guidance bespoke approach is likely to be required here. Mitigation is not possible/practicable.</p>	<p>5. National level discussions are ongoing between the Applicant and Natural England regarding LA 105 Air Quality. Both the Applicant and Natural England are in agreement that a resolution at a national level is the preferable way forward, although agree that it may be necessary to seek agreement at a scheme level depending on the timescales of discussions at a national level.</p> <p>6. As detailed in the Applicant's Written Summary of Oral Submissions to Hearings at Deadline 6 [REP6-044], the Applicant's understanding of Natural England's position is that, at a local level, the measures to render the Scheme acceptable to Natural England are capable of being agreed. A meeting between the Applicant and Natural England to discuss the air quality impacts of the Scheme is being arranged (provisionally for the week commencing 17 May 2021), and the outcomes of this meeting will be captured in the updated Statement of Common Ground to be submitted at Deadline 8 (depending on the date of the meeting).</p> <p>7. In the Updated Biodiversity Air Quality DMRB Sensitivity Assessment [REP3-010], there are four receptors with significant effects: Borough Wood Local Nature Reserve (LNR) and Ancient Woodland (considered as a single receptor as the impacted areas are the same), Well Wood Ancient Woodland and two veteran trees.</p> <p>8. The Applicant agrees that mitigation is not possible or practical for these four receptors, which was discussed and agreed with NCC and Natural England during a meeting on 05 February 2021 (as detailed within the draft Statement of Common Ground with NCC [REP6-030] and the draft Statement of Common Ground with Natural England [REP6-031]). Mitigation measures identified in LA 105 Air Quality that have been explored by the Applicant comprise 1) a vertical barrier of at least 9m in height and 2) speed limits adjusted for air quality. Option 1 is not considered viable due to the visual impacts and safety implications at the sites of impact and option 2 is not viable as it goes against the objectives of the Scheme. No further viable mitigation measures have been identified by the Applicant or through consultation with NCC and Natural England.</p>
	<p>It is for NE and the applicant to mutually agree this bespoke approach to impact assessment and appropriate compensation for that impact.</p>	<p>9. The Applicant agrees with NCC that it may be necessary to seek agreement with Natural England at a Scheme level. The Applicant confirms that discussions are ongoing with Natural England in order to reach agreement as to the impact assessment and compensation.</p>
	<p>Strategic compensation to reduce atmospheric concentration of N in other sectors likely suitable compensation with HE working with other delivery partners with links to e.g. catchment schemes with agriculture.</p>	<p>10. The Applicant has considered NCC's comment that suitable compensation could involve measures to reduce nitrogen deposition from other sectors/sources (such as agriculture), although the Applicant has not been able to secure such measures. The Applicant is currently exploring opportunities for compensation for the theoretical damage of habitat through provision of planting of equivalent habitat and/or opportunities for enhancement (improvement), through provision of measures to address existing threats and pressures to the site/habitat. The Applicant will actively engage further with NCC and Natural England on this matter and envisages to be in a position to provide a substantive update of proposals at Deadline 8.</p>
	<p>The need for compensation arises as the site is already over the critical load for N.</p>	<p>11. Whilst it is correct to identify that the critical load for each site/habitat assessed is already exceeded, the Applicant disagrees with NCC's statement because it is not exceedance of a critical load in the baseline that triggers compensatory provision. The need for mitigation or compensation arises due to the significant effects identified as a result of impacts from increased nitrogen deposition as a consequence of the Scheme. This reflects paragraph 4.3.12 of Chapter 4: Environmental Assessment Methodology [APP-039], which states, "where significant adverse environmental effects are identified, mitigation measures are</p>

			<p><i>required to remove, reduce or offset the impacts [compensation] or reduce their significance”.</i></p>
		<p>The ASNW and neighbouring non ASNW woodland at Coquet crossing is already impacted by emissions from the existing road – baseline consideration. How much the change is significant against this baseline when considered against the system being over capacity for N (critical load)</p>	<p>12. The Applicant has no evidence to confirm that the woodland (ancient semi-natural woodland (ASNW) and non ASNW) associated with the River Coquet and Coquet Valley Woodlands SSSI and Coquet River Felton Park LWS at the location of the new bridge over the River Coquet is already being impacted by emissions from the existing road. However, as detailed above and in paragraph 2.1.9, Updated Biodiversity Air Quality DMRB Sensitivity Assessment [REP3-010], the critical load of the woodland habitat at these two designations is currently exceeded, and would continue to be, without the Scheme.</p> <p>13. For the River Coquet and Coquet Valley Woodlands SSSI (which contains Duke’s Bank ancient woodland) and Coquet River Felton Park LWS, the assessment [REP3-010] in accordance with LA 105 Air Quality identified that there would not be neutral and slight adverse (not significant) effects, respectively, as a result of increased nitrogen deposition from vehicle emissions.</p>
		<p>We understand there is also some discussion with NE/HE over the need for ammonia deposition modelling but again (as we are for normal planning cases) we would look to NE’s technical specialists for guidance.</p>	<p>14. The assessment of impacts from air quality on biodiversity (designated habitats) has been completed in accordance with DMRB LA 105 Air Quality guidance. LA 105 Air Quality specifies that, for designated habitats, the pollutant included within the assessment is NO2 (concentrations and subsequent deposition). LA 105 Air Quality does not specify the need for an ammonia deposition assessment. As such, an assessment has not been undertaken and is not proposed.</p>
		<p>Other woodlands – offset improvement schemes being investigated (small scale localised improvements on heavily used sites around the R. Blyth and Wansbeck) – detail required but general approach is accepted.</p>	<p>15. The Updated Biodiversity Air Quality DMRB Sensitivity Assessment [REP3-010] identified significant effects in relation to Borough Wood Local Nature Reserve (LNR) and Ancient Woodland (considered as a single receptor as the impacted areas are the same) located along the River Wansbeck, and Well Wood Ancient Woodland located along the River Blyth.</p> <p>16. Further to the meeting held with NCC and Natural England on 05 February 2021, the Applicant can confirm that they are exploring opportunities to address the theoretical degradation to woodland habitat as a result of increased nitrogen deposition from vehicle emissions due to the Scheme. This may involve compensation through woodland planting and/or enhancements (improvements) to the designated sites through the provision of measures to offset existing threats and pressures.</p> <p>17. The Applicant welcomes NCC’s agreement with this approach.</p> <p>18. As detailed within the Applicant's Written Summaries of Oral Submissions to Hearings submitted at Deadline 6 [REP6-044], the Applicant has been awaiting a response from the Countryside, Parks and Green Spaces team at NCC in order to</p> <p>19. progress discussions further. The Applicant received a response from NCC on 06 May 2021, confirming that they would review opportunities for compensatory planting and enhancement measures at Borough Wood and Well Wood. The Applicant received suggested options from NCC on 11 May 2021 and will actively engage further with NCC on this matter. The Applicant envisages to be in a position to provide a substantive update of proposals at Deadline 8.</p>
		<p>However, the scheme’s air quality impacts are best addressed through a strategic compensation scheme which reduces atmospheric pollutants (N) via agriculture. Questions in discussion on and practicability of those however a commitment</p>	<p>20. The Applicant will continue to discuss with NCC the potential compensation actions that could be delivered to address the significant air quality effects identified in the Updated Biodiversity Air Quality DMRB Sensitivity Assessment [REP3-010]. The Applicant envisages to be in a position to provide a substantive update of proposals at Deadline 8.</p>

		to fund e.g. work with farmers via delivery partners would be welcome (presumably with reporting/monitoring mechanisms to demonstrate. Figures are available giving robust and widely accepted data on reduction achieved through e.g. covered muck stores which could be used to quantify the impacts of such a scheme. (DEFRA RAPIDS project Appendix 3)	
BIO2.5	In its LIR [REP1-071] NCC stated (paragraph 5.48) that it was considered far from clear that the loss of ancient woodland was being addressed satisfactorily from a spatial point of view in terms of the wording of Policies ENV1 and QOP 4 in the emerging Northumberland Local Plan. It was recognised by NCC that while the policies cannot be given full weight, neither of the parts quoted is the subject of significant outstanding objections. The Applicant responded to the LIR at D3 [REP3-025]. NCC is asked to comment on the Applicant's response within the context of NCC's statement that the overall ancient woodland strategy is welcomed (LIR 6.7.10).	We agree that the applicant's response at D3 Rep [REP3-025] addresses the issue of 'exceptional circumstances' and that the woodland strategy as agreed with NE (subject to some fine detail) is acceptable compensation. We also agree that the applicant has addressed the mitigation hierarchy and that the crossing at this point is the 'least harm' option. Therefore we consider that the reasons for this development and the compensation strategy (12:1 replacement, soil translocation and 50 year management strategy of a new woodland contiguous with the SSSI) are appropriate and in accordance with emerging plan policies.	<ol style="list-style-type: none"> 1. The Applicant welcomes NCC's agreement with the assessment of the Scheme as an 'exceptional circumstance' (for the purposes of compliance with Emerging Policy 4 with regard to the loss of ancient woodland habitat), the Ancient Woodland Strategy [REP4-054 and 055] as acceptable compensation and that the Scheme and the compensation strategy align with emerging local planning policies. 2. The Applicant understands NCC's reference to "<i>subject to some fine detail</i>" to be a reference to the Ancient Woodland Strategy, which refers to matters to be developed and refined at detailed design (as identified within the Ancient Woodland Strategy for Change Request [REP4-054 and 055]. These include, for example, the final design of the public right of way beneath the bridges over the River Coquet (paragraph 3.2.3 [REP4-054 and 055]), an arboricultural method statement (paragraph 3.2.9 [REP4-054 and 055]), the practicalities of material salvage and translocation (paragraphs 3.2.14, 3.2.15 and 3.3.1 [REP4-054 and 055]) and an Ancient Woodland Management and Monitoring Plan (Section 5 [REP4-054 and 055]). The Ancient Woodland Strategy, including those matters to be developed and refined at detailed design, is secured by measures A-L6, A-B3, A-B42, A-B43, A-B44, A-L9, SW-L1 and SW-B6 of the Outline CEMP [REP6-025 and 026] (as updated at Deadline 7). The Ancient Woodland Strategy is also secured by Requirement 15, Schedule 2 of the Draft DCO [REP6-010 and 011].
BIO2.6	The Applicant's Comments on the LIR [REP3-025] responding to paragraph 6.7.1 of the LIR indicate that the Applicant has issued additional assessment information comprising	<p>Updated HRA Reports [REP1-012 and REP1-013] – NE agreement January 2021. We agree with scope (10km) and agree with the conclusions (NO LSE).</p> <p>HRA Addendum Report [REP1-043]; We agree with the conclusions (NO LSE).</p>	<ol style="list-style-type: none"> 3. The Applicant welcomes NCC's agreement with the scope and conclusions of the HRA reports issued at Deadline 1 (Updated HRA Report [REP1-012 and 013] and BIO.1 North Northumberland Dunes SAC Habitats Regulations Assessment Addendum Report [REP1-043]. 4. These reports have subsequently been superseded by the Updated Habitats Regulations Assessment Report for Change Request issued at Deadline 4 [REP4-056 and 057]. The Applicant is engaging with Natural England as the statutory regulator and is awaiting comment on the Updated Habitats Regulations Assessment Report for Change Request [REP4-056 and 057].

<p>Updated HRA Reports [REP1-012 and REP1-013] and HRA Addendum Report [REP1-043]; Biodiversity No Net Loss Assessment for the Scheme [REP2-009]; Annex A – Approach to the Assessment of Losses and Gains of Watercourse [REP2-010]; and Updated Biodiversity Air Quality DMRB Sensitivity Assessment [REP3-010]. NCC has not yet commented on these documents and is asked to do so.</p>	<p>Biodiversity No Net Loss Assessment for the Scheme [REP2-009]; We would prefer to see an improvement via landscaping and habitat creation but biodiversity net gain (BNG) is not currently mandatory (and exemption for NSIP) nationally or in Northumberland (ENV 2 of ELP secures in general terms rather than via BNG). We agree that the principles of BNG have been applied but would continue to request additional offsets where practicable (may be opportunities linked to air quality impacts/catchment level offsets). Ancient semi-natural woodland and SSSI impacts cannot be included in a biodiversity net gain assessment and must be considered separately under current guidance and DEFRA metric for BNG.</p>	<ol style="list-style-type: none"> 5. The Applicant notes that NCC recognises that biodiversity net gain is not a legal requirement for Nationally Significant Infrastructure Projects (NSIPs) (such as this Scheme) and is also currently not mandatory at a local policy level. 6. Whilst not a requirement for a NSIP, a biodiversity no net loss report has been produced for the Scheme [REP5-038 and 039] in order to meet the Applicant's own internal biodiversity plan (Highways England Biodiversity Plan). As confirmed in the Applicant's Written Summary of Oral Submissions at Hearings [REP4-026], the Applicant looks to consider biodiversity impacts across its whole network at a national scale as opposed to considering it on a scheme by scheme basis. The biodiversity no net loss report which has been produced will therefore be used to inform biodiversity changes at a national level. 7. The Applicant notes that NCC agree that the principles of biodiversity net gain have been applied to the Scheme. 8. As detailed in the response against BIO.2.4 above, the Applicant continues to explore opportunities to offset the possible degradation to woodland habitat as a result of increased nitrogen deposition from vehicle emissions due to the Scheme. The Applicant also continues to engage with the Environment Agency with regards to the loss of watercourse as a result of culverting across the Scheme. The position of the Applicant remains that sufficient measures have been identified to mitigate and/or offset the assessed impacts, although the Environment Agency disagree. This remains under discussion. 9. Further, the Applicant has committed to develop a strategy of biodiversity enhancements, based on opportunities identified within paragraph 9.9.11 of Chapter 9: Biodiversity Part A [APP-048], paragraph 9.9.9 of Chapter 9: Biodiversity Part B [APP-049], and Section 3.2 of the Ancient Woodland Strategy for Change Request [REP5-054 and 055]. The strategy will be developed in consultation with relevant stakeholders. This is secured by measure S-B20 of the Outline CEMP [REP6-025 and 026] (as updated at Deadline 7). 10. The Applicant agrees that ancient semi-natural woodland (as an irreplaceable habitat) and SSSIs (as a statutory designated site) cannot be included in the biodiversity no net loss assessment. As detailed in paragraphs 2.4.3 to 2.4.6 of the Biodiversity No Net Loss Assessment for the Scheme for Change Request [REP5-038 and 039], ancient woodland habitat associated with the River Coquet and Coquet Valley Woodlands SSSI (designated ancient woodland) and Coquet River Felton Park LWS (not designated but treated as ancient woodland within the assessment for the purpose of mitigation) has been excluded from the biodiversity unit calculation. A separate strategy (Ancient Woodland Strategy for Change Request [REP4-054 and 055]) has been developed in consultation with Natural England to address the loss of ancient woodland habitat as a result of the Scheme.
	<p>Annex A – Approach to the Assessment of Losses and Gains of Watercourse [REP2- 010] – in this case would defer to EA but provided that connectivity is maintained via the watercourses, the culverted/diverted sections are designed sympathetically (gravel beds and ledges) no objections based on the loss of watercourses given the nature of the scheme. Offset via catchment improvement is desirable.</p>	<ol style="list-style-type: none"> 11. The Applicant confirms that the approach to the design of culverts (both extensions and new) has been sympathetic, considered connectivity of wildlife and has been informed by the ecological surveys undertaken. Natural beds for fish passage and mammal ledges have been considered for all culverts and included where this is achievable and required. The Culvert Mitigation Strategy [REP5-022] represents a summary document used to assist consultation with the Environment Agency and other parties. The document details where natural beds and mammal ledges are proposed for each culvert, with an explanation where these features are not proposed for inclusion. For example, it has not been possible to retrofit these features into existing culverts proposed for extension, due to the constraints of the dimensions of the culvert and health and safety regulations. However, culvert design has been considered within the biodiversity assessment of

		significant effects (presented in Chapter 9: Biodiversity Part A [APP-048] and Part B [APP-049].
		12. The Applicant continues to engage with the Environment Agency with regards to the loss of watercourse as a result of culverting across the Scheme. The position of the Applicant is that sufficient measures have been identified to mitigate and/or offset the assessed impacts, although the Environment Agency disagree. This remains under discussion.
	Updated Biodiversity Air Quality DMRB Sensitivity Assessment [REP3-010]. – see above response to BIO2.4.	13. No response required.
	No major change to previous comments although would continue to request improvements on no net loss where practicable. We would support every possible opportunity to maximise gains for biodiversity within the order limits, zone of influence (ZOI) for the scheme and catchments.	<p>14. As detailed above, the Applicant looks to consider biodiversity impacts across its whole network at a national scale as opposed to considering it on a scheme by scheme basis. The biodiversity no net loss report which has been produced will therefore be used to inform biodiversity changes at a national level.</p> <p>15. The Applicant has sought to maximise gains for biodiversity within the Order limits. As detailed in paragraph 4.1.14 of the Biodiversity No Net Loss Assessment for the Scheme for Change Request [REP5-038 and 039], whilst no net loss cannot be claimed for the Scheme as a whole, due to the loss of irreplaceable habitat (ancient woodland), medium distinctiveness woodland and scrub and river habitat, the assessment calculation does identify a net gain in hedgerows, area-based priority woodland and wetland habitats.</p> <p>16. The Applicant has also committed to develop a strategy of biodiversity enhancements, based on opportunities identified within paragraph 9.9.11 of Chapter 9: Biodiversity Part A [APP-048], paragraph 9.9.9 of Chapter 9: Biodiversity Part B [APP-049], and Section 3.2 of the Ancient Woodland Strategy for Change Request [REP5-054 and 055]. The strategy will be</p> <p>17. developed in consultation with relevant stakeholders. This is secured by measure S-B20 of the Outline CEMP [REP6-025 and 026] (as updated at Deadline 7).</p>

Table 1-7 – Tom Lloyd

Ref	Deadline 6 Submission	Applicant's Response
1	<p>This submission is a comment on the following documents, and relates to the location of Fenrother junction on Part A :-</p> <ol style="list-style-type: none"> Document 1 - Action Point 36 Response within Document TR010059-001545-DL5_Northumberland County Council_Comments on Deadline 4 submissions. from NCC as submitted for Deadline 5 and uploaded on 7 April 2021 Document 2 - Section 3 of TR010059-001390-David Morrow on behalf of the Applicant - Comments on responses submitted for Deadline 3 from HE responding to my previous submission and uploaded on 	<p>1. The Applicant assumes that Mr Lloyd is referring to the following documents:</p> <ul style="list-style-type: none"> Deadline 5 Submission - Comments on responses submitted for Deadline 4 [REP5-042] Table 1-3, Deadline 4 Submission – Applicant's Responses to Further Deadline 2 Submissions [REP4-033]

Ref	Deadline 6 Submission	Applicant's Response																																		
2	Having commuted daily from Amble to Newcastle for 9 years, I have been questioning why Fenrother junction is not located 2.7km further north at the much busier Causey Park junction ever since the preferred offline route for Part A was announced in 2017.	<ol style="list-style-type: none"> The Applicant has previously responded in detail to Mr Lloyd's representations on the reasons for the choice of junction location at Fenrother rather than Causey Park, and this is set out in the Response to Further Deadline 2 Submissions [REP4-033] submitted at Deadline 4. 																																		
3	<p>Although Document 2 above tried to justify the junction location at Fenrother, it still leaves unanswered questions that are reinforced by NCC's concerns in Document 2 regarding non-motorised users of the detrunked A1. The current proposal means c.2,500 vehicles/day accessing the new A1 south from Chevington Road will face three new frustrations :-</p> <ol style="list-style-type: none"> Giving way to a road with less than a third of its traffic at Causey Park (which most of this traffic already does TWICE at West Chevington junctions despite NCC's major upgrades to Chevington Road) Driving along a newly narrowed detrunked A1 within inches of the non-motorised N-S users for 2.4km to Fenrother Crossing itself unnecessarily at the east T junction within the Fenrother junction layout, significantly increasing collision risks 	<ol style="list-style-type: none"> The Applicant has not undertaken detailed modelling of the proposed alternative junction location, but an inspection of forecast traffic flows from the SATURN strategic model of the Scheme indicates that the proportion of traffic on Chevington Road which goes on to access the A1 at Fenrother varies between 65% and 87% during weekday peak periods. The remaining 13%-35% of traffic is local. Therefore, the Applicant considers that under the proposed alternative arrangement traffic, flows on the de-trunked A1 between Chevington Road and Fenrother may reduce to around 300-900 vehicles per day rather than 200 as stated. As set out in the Applicant's Response to Further Deadline 2 Submissions [REP4-033], reference 1.2.4 (paragraph 1) submitted at Deadline 4, the number of vehicles in each direction on Chevington Road is forecast to be a maximum of around 3 vehicles per minute during peak periods. The Applicant would confirm that the number of vehicles approaching the junction from the North on the de-trunked A1 is fewer than 1 vehicle per minute. Given the limited traffic flows on the de-trunked A1 it is not expected that there will be any significant delays when turning southbound onto the de-trunked A1. In order to quantify this, the Applicant has produced a Junctions 9 operational model of the Chevington T junction which is included as Appendix B. Junctions 9 is industry standard software developed by the Transport Research Laboratory (TRL) This software uses junction geometry measurements taken from the latest design drawings and turning flows from the latest core scenario models at opening year (2023). It produces a forecast of the operation of the junction, including delays and queues on each junction approach arm. The results of this assessment are summarised below. The Ratio of Flow to Capacity (RFC) value represents the level of congestion on each junction approach – a value of 0.85 or less indicating an acceptable level of operation. The forecast queues are shown as a number of PCU (passenger car units), which is a standard capacity unit used in highway engineering which is the equivalent of an average car. The delay represents average delay per vehicle in seconds. It can be seen that the junction is forecast to operate well within capacity, with RFC values well below 0.85 and minimal queuing and delay. <table border="1" style="margin-top: 20px;"> <thead> <tr> <th rowspan="2"></th> <th colspan="3">AM Peak</th> <th colspan="3">PM peak</th> </tr> <tr> <th>Queue (pcu)</th> <th>Delay (s)</th> <th>RFC</th> <th>Queue (pcu)</th> <th>Delay (s)</th> <th>RFC</th> </tr> </thead> <tbody> <tr> <td>Chevington Rd left</td> <td>0.1</td> <td>6.29</td> <td>0.11</td> <td>0.1</td> <td>6.24</td> <td>0.09</td> </tr> <tr> <td>Chevington Rd right</td> <td>0.0</td> <td>7.42</td> <td>0.02</td> <td>0.1</td> <td>8.03</td> <td>0.1</td> </tr> <tr> <td>De-trunked A1 South Right Turn</td> <td>0.1</td> <td>6.00</td> <td>0.07</td> <td>0.1</td> <td>5.94</td> <td>0.06</td> </tr> </tbody> </table>		AM Peak			PM peak			Queue (pcu)	Delay (s)	RFC	Queue (pcu)	Delay (s)	RFC	Chevington Rd left	0.1	6.29	0.11	0.1	6.24	0.09	Chevington Rd right	0.0	7.42	0.02	0.1	8.03	0.1	De-trunked A1 South Right Turn	0.1	6.00	0.07	0.1	5.94	0.06
	AM Peak			PM peak																																
	Queue (pcu)	Delay (s)	RFC	Queue (pcu)	Delay (s)	RFC																														
Chevington Rd left	0.1	6.29	0.11	0.1	6.24	0.09																														
Chevington Rd right	0.0	7.42	0.02	0.1	8.03	0.1																														
De-trunked A1 South Right Turn	0.1	6.00	0.07	0.1	5.94	0.06																														

Ref	Deadline 6 Submission	Applicant's Response
		<p>6. The Applicant does not therefore accept that this will lead to a new frustration and as the number of vehicles on the de-trunked A1 will be significantly reduced it will be a significant improvement on the present situation without the Scheme.</p> <p>7. As NCC notes in point 10 of Action Point 36 [REP5-042] the de-trunked A1 is a wide single carriageway with good horizontal and vertical alignment and good forward visibility. No works are proposed as part of the Scheme to narrow the de-trunked A1. Even if NCC decided to incorporate a cycle lane, the de-trunked A1 will not become a narrow single carriageway and will still have good horizontal and vertical alignment and good forward visibility. There is therefore no basis for the submission that the de-trunked A1 would be narrowed such that it would result in a new frustration for the reduced number of vehicles using the de-trunked A1. Indeed, the Applicant notes that NCC's concerns in Action Point 36 related to the increased average speed of vehicles using the de-trunked A1 following completion of the Scheme as opposed to there being any delays on the road.</p> <p>8. The Applicant confirms that there are no other junctions when travelling south on the de-trunked A1 to join the A1 southbound via the new link road and Fenrother Junction. The Applicant acknowledges that northbound vehicles leaving the A1 at the Fenrother Junction will have to turn right at a T junction to travel further north and east via the de-trunked A1. The number of vehicles turning right at this T junction is estimated to be 73 during the morning peak hour and 71 during the evening peak hour – a maximum of approximately one vehicle every 50 seconds.</p> <p>9. The Applicant confirms that this T Junction will be designed to current standards in terms of visibility etc. and the design will be subject to Stage 2, 3 and 4 Road Safety Audits to ensure that it does not present a risk to health and safety. The Applicant does not therefore accept that there will be a significant collision risk for vehicles negotiating this T Junction.</p>
4	<p>I attach a sketch plan of my alternative junction layout at Causey Park which removes ALL of these frustrations and gives other advantages for a very similar construction cost as far as I can tell from available information.</p>	<p>1. The Applicant notes the alternative junction layout suggested by Mr Lloyd at Causey Park and would offer the following comments.</p> <p>2. The alternative junction location would require additional land outside the Order Limits for the junction itself together with a new link road from the junction to Chevington Road and cannot be provided as part of the current Scheme. It is assumed that in conjunction with providing the alternative junction at Causey Park a new overbridge would be provided at Fenrother. If a new overbridge were not to be provided, then the de-trunked A1 south of Chevington Road would become a cul-de sac and there would be a significant increase in journey length and time in travelling from Fenrother to Tritlington.</p> <p>3. As set out in this response and the Applicant's comments in the Appendix (document reference 7.27.1) there is no substantial benefit from this alternative proposal which would outweigh the public interest in proceeding with the present Scheme.</p> <p>4. The respondent is proposing a crossroads at the intersection of Chevington Road and the de-trunked A1 together with a change in the priority such that Chevington Road and the new link road to a junction at Causey Park become the priority route with the de-trunked A1 becoming the side roads. Section 4.3e) of TD 42/95 The Geometric Design of Major/ Minor Priority Junctions states that the replacement of a rural crossroads by a staggered junction with the side roads offset from each other has been shown to reduce accidents by some 60% i.e. with a crossroads arrangement there is an increased risk of traffic on side roads going straight across the junction without reducing speed.</p>

Ref	Deadline 6 Submission	Applicant's Response
		<ol style="list-style-type: none"> 5. TD 42/95 has recently been superseded by CD123 Geometric design of at-grade priority and signal-controlled junctions. Section 2.21 Note 2 of CD 123 states that staggered junctions are safer than crossroads where a significant proportion of the flow on the minor roads is a cross flow. 6. As the alternative arrangement has not been modelled it is not possible to confirm if a significant proportion of the flow would be a cross flow. However, it is clear from standards that staggered junctions are safer. For the Fenrother junction option the present T junction arrangement would be retained, and the junction affords good visibility when turning left or right from Chevington Road in compliance with standards. 7. The change in the priority of the junction from the present arrangement will also increase the safety risk until drivers who have regularly used the junction become accustomed to the revised arrangement. 8. Cyclists and pedestrians travelling on the de-trunked A1 will have to give way and cross the new priority route formed by an extension of Chevington Road increasing the safety risk. 9. The respondent is proposing that northbound traffic leaving the A1 at the proposed Causey Park Junction and heading east would have priority over southbound traffic leaving the A1 with a T junction on the loop road. This arrangement results in a relatively short queuing length for southbound traffic leaving the A1. While the number of southbound vehicles leaving the A1 at the junction is expected to be relatively low in normal circumstances if there was an increase in traffic leaving the A1 due to a particular peak such as attending an event it could lead to the queue for the T junction extending back onto the A1 southbound diverge or onto the A1 carriageway itself with the consequent safety risks. 10. The respondent is proposing that the re-aligned PROW has to cross over the link road from the proposed Causey Park Junction to Chevington Road/ the de-trunked A1. This conflict between vehicles and non-motorised users of the PROW creates a safety risk. The present arrangement has this PROW joining a footpath on the south side of Causey Park Road so there is no requirement for non-motorised users to cross the carriageway. 11. There is a high-pressure gas main at Causey Park which has already been diverted to accommodate the new A1 alignment. Providing a junction and access road at Causey Park would require a further crossing of the gas main with the potential for protection works.
5	<p>With my proposal traffic on the detrunked A1 would be dramatically reduced, from c.2,500 to c. 200 vehicles/day, based on NCC's table 36.2, and non-motorised N-S traffic would merely cross coastal access E-W traffic at Causey Bridge, leaving only very local traffic from Burgham Park and Tritlington on the narrowed detrunked A1.</p>	<ol style="list-style-type: none"> 1. The Applicant acknowledges that implementation of the proposal presented by the respondent would further reduce the volume of traffic using the de-trunked A1. The question is whether it is necessary and appropriate to do so – the Applicant concludes not. 2. The respondent has not supplied traffic modelling. The Applicant has not undertaken detailed modelling of the proposed alternative junction location, but an inspection of forecast traffic flows from the SATURN strategic model of the Scheme indicates that the proportion of traffic on Chevington Road which goes on to access the A1 at Fenrother varies between 65% and 87% during weekday peak periods. The remaining 13%-35% of traffic is local. Therefore, the Applicant considers that under the proposed alternative arrangement traffic, flows on the de-trunked A1 between Chevington Road and Fenrother may reduce to around 300-900 vehicles per day rather than 200 as stated. 3. However, the de-trunked A1 is a wide single carriageway with good horizontal and vertical alignment and good forward visibility and is more than capable of safely carrying the projected traffic flows following opening of the Scheme even if NCC decides to incorporate a cycle lane. No narrowing of the de-trunked A1 is proposed as part of the Scheme. Given the current standard of the de-trunked A1 being a wide single carriageway with good alignment and

Ref	Deadline 6 Submission	Applicant's Response
		<p>visibility there is no design requirement to further reduce traffic flows following completion of the Scheme. even if NCC were to incorporate a cycle route. As set out in the response to point 4 above with the respondent's alternative proposal cyclists and pedestrians using the de-trunked A1 would have to cross the priority route formed by the extension of Chevington Road and this conflict would create an additional safety risk which doesn't arise with the proposed Scheme.</p>
6	<p>I also believe the Fenrother junction should be inverted N-S WHETHER IT IS SITUATED AT FENROTHER OR CAUSEY PARK, as the current layout causes all the coastal/A1 south traffic to needlessly cross itself at the east side T junction, thus increasing the risk of collisions</p>	<p>1. The Applicant confirms that if the Fenrother junction were inverted then a T junction would still be required on the east side of the junction. The Applicant notes that the respondent has proposed a change in the junction priority in his sketch for the alternative junction location at Causey Park. However as set out in the response to point 4 above this arrangement still requires a T junction and results in additional potential safety issues with the queue lengths for traffic approaching the T junction.</p>
7	<p>I therefore ask the Planning Inspectorate to reconsider HE's proposal and the need for HE to show their design is the optimum one and not just an adequate one, which I still do not believe they have demonstrated, ON ROAD SAFETY ASPECTS ALONE.</p>	<p>1. It is not incumbent upon Highways England to demonstrate that its design is the optimum design, neither is it necessary to disprove the superiority of other designs put forward by third parties.</p> <p>2. The Applicant has set out in detail in the Applicant's Response to Further Deadline 2 Submissions [REP4-033] that following public consultation and assessment the Preferred Route Announcement in September 2017 included for the Fenrother Junction and an overbridge at Causey Park.</p> <p>5. The selection of the junction location prior to Preferred Route Announcement was based on a number of factors. These are set out in the PRA area of the Applicant's project website (https://highwaysengland.citizenspace.com/he/a1-in-northumberland/results/n170030_a1-northumberland_pra---morpeth-to-ellingham_v3_digital.pdf) and as follows:-</p> <ul style="list-style-type: none"> - Consultation feedback - Cost - Cost benefit ration based on economic assessment - Ease of construction - Road safety including alignment and geometric standards - Impacts on road user satisfaction - Impacts on WCH - Impacts on local communities and landowners - Environmental impacts <p>3. The Technical Appraisal Report (ref B2104700-OD-051) and Scheme Assessment Report (ref B2104700-OD-2470) were available on request as part of the non-statutory consultation. This document sets out the assessment of the overall routes for Parts A and B and includes the junction strategy aims under section 4.8.</p> <p>4. Regarding the choice of junction location at Fenrother rather than Causey Park, there are several factors other than traffic flows which have been taken into consideration:</p> <ul style="list-style-type: none"> • The western connection to the A697 at Fenrother is more direct (2.4km compared to 4.4km), less sinuous (straighter) and of a higher standard (generally wider permitting two-way traffic) than the connection at Causey Park. This will improve the east-west connectivity for vehicles using the A1 and Fenrother Junction compared to a Causey Park Junction. Local journeys can still use the proposed Causey Park bridge if preferred.

Ref	Deadline 6 Submission	Applicant's Response
		<ul style="list-style-type: none"> • There are no environmental constraints within the Order limits around the proposed Fenrother Junction. However, applying a similar footprint for a junction at Causey Park would encroach onto a number of environmental constraints including mine entry locations (which could have the potential for impacts associated with ground instability and release of hazardous mine gas), a Public Right of Way (PRoW) and potentially two non-designated heritage assets. • There would also likely be direct adverse visual impacts on 2no. residential properties at Causey Park Hag Lodge, which are likely to be subject to additional impacts, resulting in significant effects during construction and in winter Year 1. • With respect to the agricultural land classification at each location, the agricultural land within the Order Limits at the Fenrother junction is predominantly of a lower grade (Grade 4) than the land within the Order Limits at Causey Park (predominantly Grade 3b with a lesser proportion of Grade 3a, BMV and Grade 4). <p>5. The Applicant has set out in response to the various points in the Appendix (document reference 7.27.1) that a junction located at Fenrother would be no less safe than a junction located at Causey Park and that with an alternative junction located at Causey Park the junction of Chevington Road with the de-trunked A1 would be less safe because a crossroads would be required together with a change in priority from the present arrangement.</p>
8	<p>To help you challenge them, here is my summary of implications for the two locations for what is easily the busiest junction on Part A i.e. between Morpeth and Felton:</p>	<p>1. The Applicant has provided a response to each of the points raised by the respondent in connection with the choice of junction location in Appendix A. There are other factors which the respondent has not considered in his table such as the impact on public utilities, the impact on the existing properties adjacent to the de-trunked A1 between Chevington Road and Tritlington and the vertical alignment of the new A1 at the location of the junctions. The key additional issues are:</p> <ul style="list-style-type: none"> • As set out in the response to point 4 above a junction at Causey Park would have an adverse impact on the existing high-pressure gas main which has already been diverted to accommodate the Scheme. • If the junction were provided at Causey Park rather than Fenrother then the journey time for residents in the properties adjacent to the de-trunked A1 between Chevington Road and Tritlington together with Tritlington School would increase when travelling to and from the south. • At the location of the Fenrother junction, the vertical alignment of the A1 is approximately at the same level as existing ground as shown on sheet 4 of the Engineering Section Drawings [APP-011]. While this results in a higher embankment to carry the connector road and overbridge over the new carriageway no significant earthworks are required along the merge and diverge lanes leading onto and off the A1, at the slip roads connecting to Fenrother lane or the new link road comprising Fenrother Lane East. • At the location of the alternative junction at Causey Park the main A1 is in a cutting approximately 3m deep as shown on sheet 7 of the Engineering Section Drawings. While this would reduce the height of the embankment leading to the overbridge above existing ground level, significant additional excavation would be required to create the merge and diverge lanes leading onto and off the A1, the slip roads at the junctions and the new link road connecting to Chevington Road. The existing ground level within the loops of the connecting road would also need to be lowered to provide adequate visibility in accordance with standards.

Ref	Deadline 6 Submission	Applicant's Response
		<ul style="list-style-type: none"> • The alternative junction would require the acquisition of additional land and cannot be accommodated within the current Scheme. 2. The Applicant's comments on each of the points raised by the respondent in the Appendix confirm that for all the points raised the alternative location of the junction at Causey Park is not an improvement on the junction location at Fenrother and for a number of the points the alternative location has disadvantages in comparison to Fenrother. The additional points considered above also confirm the further disadvantages of the alternative location.
9	<p>I realise HE have more facts available than I do, and that traffic is not the only design factor, but it is surely the main reason for any road scheme, with road safety close behind. The Causey Park junction is clearly a better option than Fenrother Junction ON BOTH COUNTS, and should be considered under item 6 at the Issue Specific Hearing 3 on 21 April 20231</p>	<ol style="list-style-type: none"> 1. The Applicant has set out the factors justifying the location of the grade separated junction at Fenrother rather than Causey in the response to the various points above and in the table at Appendix A. 2. The Applicant confirms that the proposed junction location at Fenrother and the adjacent road network can readily accommodate the expected traffic flows following opening of the Scheme with minimal delays, that the design and implementation of the Scheme will ensure that the roads and junctions are safe to use and that the junction location at Fenrother is preferable to an alternative at Causey Park for the reasons set out in the foregoing and the Applicant's comments in Appendix A (document reference 7.27.1).

© Crown copyright 2020.

You may re-use this information (not including logos) free of charge in any format or medium, under the terms of the Open Government Licence. To view this licence:

visit www.nationalarchives.gov.uk/doc/open-government-licence/

write to the **Information Policy Team, The National Archives,**

Kew, London TW9 4DU, or email

psi@nationalarchives.gsi.gov.uk.

This document is also available on our website at www.gov.uk/highways

If you have any enquiries about this document
A1inNorthumberland@highwaysengland.co.uk

or call **0300 470 4580***.