

Date: **16 December 2022**  
Our ref: 415176  
Your ref: TR010062



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**BY EMAIL ONLY**

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Dear Mr. Allen

**NSIP Reference Name / Code: A66 Northern Trans-Pennine Project**  
**User Code: A66D-EIA006**

**Title: Natural England's [Written Representations](#)**

**Examining authority's submission deadline 18<sup>th</sup> December**

Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development.

For any further advice on this consultation please contact the case officer [Niamh Keddy](#) and copy to [consultations@naturalengland.org.uk](mailto:consultations@naturalengland.org.uk).

Yours sincerely

Niamh Keddy

Sustainable Development Lead Advisor

## **WRITTEN REPRESENTATION**

PART I: Summary and Conclusions of Natural England's advice.

PART II: Natural England's detailed advice (starting at page 8)

PART III: Natural England's Written Representations – detail our response to the applicant's response to our Relevant Representations (starting on page 13)

## **Natural England's Written Representations**

### **Part I: Summary and Conclusions of Natural England's advice.**

#### **Summary of Natural England's Advice**

Natural England welcome the opportunity to comment on the DCO for the A66 and welcome the inclusion of the mitigation and biodiversity principles. We have provided comments on the mitigation proposed for the River Eden SAC below in Table 2 and Table 3 and are satisfied that if our comments are taken on board and the biodiversity priorities are secured, and the design and mitigation principles are adhered to (and not subsequently amended) then there should be no adverse effect on integrity of the River Eden SAC. Further information is needed to understand the impacts and design of the construction works and any temporary structures (in particular the temporary bridge over Troutbeck) in relation to the River Eden SAC and its designated features. It should be noted that our conclusion of no adverse effect on integrity may change if the guidance we have provided on the mitigation and design principals is not followed appropriately.

Natural England have provided further advice on the air quality issues last discussed in our relevant representations. We note that National Highways have committed to producing a further technical note, regarding the use of aspects from LA105 and NEA001, the assessment of ammonia and further information about emission sources in the in-combination assessment.

Natural England have responded to National Highways response to our relevant representations for the EMP; stating where we agree or where we need further information entering into the EMP. We have provided a response to National Highways response in our Landscape section about the rating of the AONB and provided an additional comment on the droughtiness scores.

The Statutory Environmental bodies (Natural England, Environment Agency and Historic England) share general concerns over the National Highways self-approval process as there are many elements of the project still to be worked up. The self-approval process may pose a risk of detrimental impacts to the environment without sufficient regulatory review. We will all continue to engage with National Highways to work through and advise on the proposed self-approval process and seek further clarification as to what the National Highways self-approval process will entail to enable a fuller assessment of the proposals against our respective statutory remits.

We were reassured by the Examining Authority (ExA) during Issue Specific Hearing 2 on 1 December 2022 that the self-approval proposals proposed by the applicant will be considered in depth during the examination process. We have made specific comments regarding timescales for the review of material submitted under the EMP self-approval process so while the comments from the applicant in PDL-013 about pre-application engagement are noted, we do not consider that they wholly address our concerns, and we will continue to engage with the applicant during the ExA in relation to the self-approval process as a whole. We want to ensure that if this process is accepted by the ExA and it becomes a template for other DCO applications in the future, we have a clear role in the decision making processes set out in the EMP and there is flexibility around our consultation arrangements where necessary. We also consider that the significance of any changes proposed to later versions of the EMP that the Secretary of State is asked to consider, should be informed by the views of all relevant statutory parties and we would hope to see this reflected in the DCO.

Part I of these written representations provides a summary (above) and overall conclusions of Natural England's advice. This advice identifies whether any progress in resolving issues has been made since submission of our relevant representations (RR-180). Our comments are set out against the following sub-headings which represent our key areas of remit as follows:

- International designated sites
- Nationally designated sites
- Protected species
- Biodiversity net gain
- Nationally designated landscapes
- Soils and best and most versatile agricultural land
- Ancient woodland and ancient/veteran trees
- Connecting people with nature (National Trails, open access land and England Coast Path)
- Other valuable and sensitive habitats and species, landscapes and access routes

Our comments are flagged as red, amber or green:

- Red are those where there are fundamental concerns which it may not be possible to overcome in their current form
- Amber are those where further information is required to determine the effects of the project and allow the Examining Authority to properly undertake its task and or advise that further information is required on mitigation/compensation proposals in order to provide a sufficient degree of confidence as to their efficacy.
- Green are those which have been successfully resolved (subject always to the appropriate requirements being adequately secured)

## **Internationally and nationally designated sites**

Natural England's position regarding internationally designated sites has not changed since submission of our Relevant Representations (RR-180).

**Our position regarding impacts on internationally designated sites is as set out in our Relevant Representation (RR – 180). We have provided our response to National Highways response in Part III Table 3.**

Natural England is not yet satisfied for 'amber' and 'red' issues identified in the Tables below that it can be ascertained beyond reasonable scientific doubt that the project would not have an adverse effect on the integrity of the following internationally designated sites. River Eden SAC, River Eden and 5 Tributaries SSSI, Temple Sowerby Moss SSSI, North Pennines SAC, North Pennines SPA and Bowes Moss SSSI and Asby Complex SAC and Ravensworth Fell SSSI

Natural England has several 'amber' issues relating to the construction around the River Eden SAC and River Eden & Tributaries SSSI, we have discussed these in more detail in Part II and Part III of this letter. Our comments highlight the need to secure the design principles and mitigation measures and ensure these are secured through an updated CEMP. Natural England require detailed design information for any temporary construction works to be included in the application and secured to ensure that the Habitats Regulations Assessment (HRA) can conclude no adverse effect on integrity of the site, at present the information that is missing means that Natural England cannot concur with the conclusions

of the Habitats Regulations Assessment (HRA). We acknowledge the additional information given by the applicant during the Issue Specific Hearing 1 regarding the self-approval process, we will continue work with National Highways and their consultants through this process.

Natural England is satisfied that 'green' issues are unlikely to result in adverse effects on the integrity (AEoI) of the following internationally designated sites, subject always to the appropriate mitigation/compensation as outlined in the application documents being adequately secured.

## **Protected species**

Natural England's position regarding European protected species has not changed since submission of our Relevant Representations (RR-180). Our position regarding impacts on protected species is as set out in our Relevant Representation (RR – 180).

Natural England is still awaiting submission of draft protected species licence applications for review. Without draft protected licence applications, we are unable to issue Letters of No Impediment (LoNI). Natural England expect the draft licence applications to come in once the detailed mitigation and construction work areas are agreed and finalised and will continue to support the selection of appropriate mitigation and compensation in regard to protected species.

## **Biodiversity Net Gain Provision**

Natural England's position regarding provision of biodiversity net gain has not changed since submission of our Relevant Representations (RR-180).

Our position regarding biodiversity net gain provision is as set out in our Relevant Representation (RR – 180).

Natural England have been involved in several discussions regarding the use of Biodiversity Net Gain within this project. Natural England accept the use of the Biodiversity Metric 2.0, given the start time of the project and how advanced these calculations were before the Metric 3.0 was released.

Natural England note that the project is aiming a 'no net loss' and in some sections of the road reporting a gain, Natural England have encouraged the project team to ensure that any habitat loss is first avoided, then mitigated and then compensated. Biodiversity Net Gain outcomes can be achieved on-site, off-site or through a combination of both. On-site provision should be considered first. Delivery should create or enhance habitats of equal or higher value. When delivering net gain, opportunities should be sought to link delivery to relevant plans or strategies.

Natural England will continue to engage with Biodiversity Net Gain plans and provide comments on detailed mitigation and delivery plans once they become finalised.

## **Nationally designated landscapes**

Natural England's position regarding nationally designated landscapes has not changed since submission of our Relevant Representations [RR-180].

Our position regarding nationally designated landscapes is as set out in our Relevant Representation (RR-180). We have provided the following updated advice in response to National Highways response to our relevant response, please see below;

Natural England would normally push for the highest level of sensitivity to be applied to all land within an AONB given its nationally designated status and its statutory purpose to conserve and enhance the area's natural beauty. The 'enhance' part of that purpose means that existing development which reduces the quality the landscape should not contribute to an assessment and subsequent justification for further development which would further close down opportunities to apply enhancement measures to bring the area into closer alignment with the wider AONB. This approach can be challenging to reconcile with the methodology for LVIA, but it represents the view of Natural England as the designating authority for the AONB and our priority to uphold the area's statutory purpose.

However, for this particular scheme and the circumstances pertaining to it we are willing to accept a 'high' rather than 'very high' sensitivity rating on this occasion. This reflects the established presence of the A66, and that the scheme is about changes to that existing road rather than a completely new scheme (albeit the alteration works involved are significant). Crucially our acceptance is based on an expectation that the design and screening mitigation to be applied to this part of the scheme will be as effective as possible in relation to the AONB and its statutory purpose, and that this will not be compromised by a high rather than very high sensitivity rating.

### **Soils and best and most versatile agricultural land**

Natural England's position regarding soils and the best and most versatile agricultural land has not changed since submission of our Relevant Representations [RR-180].

Our position regarding soils and best and most versatile agricultural land is as set out in our Relevant Representation (RR – 180).

Natural England are satisfied that National Highways have acknowledged the discrepancies between the reports and set out how this will be addressed during the examination via an Errata.

National Highways have not confirmed their stance on the droughtiness calculations which we have requested be provided in our relevant representations. Natural England would expect to see the droughtiness calculations provided in the Errata alongside the additional Lab data and discussion National Highways have stated will be provided, we will also provide comments on droughtiness in further iterations of the EMP.

### **Ancient woodland and ancient/veteran trees**

Natural England's position regarding ancient woodland and ancient/veteran trees has not changed since submission of our Relevant Representations [RR-180].

Our position regarding ancient woodland and ancient/veteran trees is as set out in our Relevant Representation (RR – 180).

Ancient woodland is an irreplaceable resource of great importance for its wildlife, soils, recreation, cultural value, history and the contribution it makes to our diverse landscapes. It is a scarce resource, covering only 3% of England's land area. Veteran trees can be hundreds of years old, provide habitat for many different species and are a part of our landscape and cultural heritage.

Natural England acknowledges the potential impacts to the ancient woodland and individual ancient/veteran trees from the A66 project. As in our standing advice we recommend that any impacts

are considered alongside the legislation in the NPPF (paragraph 180) and in line with standing advice in relation to ancient woodland and ancient and veteran trees produced by Natural England and Forestry Commission. Natural England will continue to engage with National Highways and their consultants, as the detail design and mitigation plans are developed, we will provide comments when they are available.

## **Connecting people with nature (National Trails, open access land and England Coast Path)**

Natural England's position regarding Pennine Trails Partnership has not changed since submission of our Relevant Representations [RR-180].

Natural England are part of the Pennine Trails Partnership and notice that while the Pennine Way has been acknowledged in document 2.4 Walking, Cycling and Horse-Riding proposal there is no mention of the Pennine Bridleway Northern Extension. Natural England support the Yorkshire Dales National Parks comments surrounding the need to include the extension way in the assessment, we will continue to engage with the detailed design in the EMP.

## Natural England's Written Representations

### Part II: Natural England's detailed advice

Part II of these representations' updates and where necessary augments Part II of the Relevant Representations. It expands upon the detail of all the significant issues ('red' and 'amber' issues) which, in our view remain outstanding and includes our advice on pathways to their resolution where possible. Part II also shows 'green' issues which have been agreed since our Relevant Representations (RR-180) (subject always to the appropriate requirements being secured adequately).

Natural England will continue engaging with the applicant to seek to resolve these concerns throughout the examination. Natural England advises that the matters indicated as 'red' and 'amber' will require consideration by the Examining Authority during the examination.

#### Natural England's Written Representations, Part II, Table 1

<b>Table 1: Natural England's updated advice on Air Quality</b>		
<b>Natural England have provided this updated guidance to National Highways and their consultants on the 7th of December, we were then involved in a discussion about these topics on the 8<sup>th</sup> of December. We note that National Highways have committed to producing a further technical note on the questions asked below.</b>		
<b>NE Key Issue Ref</b>	<b>Updated guidance</b>	<b>Risk: Red/ Amber/Green</b>
<b>1.1</b>	In regard to the method followed, Natural England are happy to support the general approach taken throughout the assessment as stated in the recent response to our relevant representations (RR-180). The consultant states that the NEA001 steps have been followed and whilst LA105 is referred to (in line with DMRB requirements), the "loss of one species metric" has not been used in any decision making. Whilst Natural England are supporting National Highways in developing an approach to replace LA105, we agree that the approach taken is a reasonable and appropriate interim in the absence of endorsed guidance published under DMRB for assessing air quality impacts under the Habitats Regulations Assessment.	<b>Amber</b>
<b>1.2</b>	Natural England understand that whilst the 0.3ug/m3 NOx threshold has been applied to the assessment, this value is exceeded and therefore both ammonia and nitrogen deposition have been calculated and applied in the final assessment. Whilst the use of an imperceptibility threshold, in particular the dismissal of ammonia and nitrogen deposition where the threshold is not exceeded, is still under discussion – irrespective of this, the necessary calculations Natural England would expect to see have been completed according to the response provided by the applicant. If this is indeed the case, then NE can support the outcome however would caution that NE is not setting a precedent of	<b>Amber</b>



	<p>supporting this imperceptibility threshold or justification as this is still under discussion. Please could National Highways confirm whether the impact of ammonia has also been assessed separately, aside from as a component of nitrogen deposition. NE require gaseous ammonia to be compared against the 1% critical level threshold, depending on whether the ecological community has an important bryophyte/ lichen component or not. We note this was also suggested by the IAQM reviewers of the National Highways ammonia model.</p>	
<p><b>1.3</b></p>	<p>Regarding the in-combination assessment, NE recognise that the DMRB model does include other sources of emissions aside those from roads. However, the response also states that the DMRB methodology does not require point sources to be assessed. Please could this be explained further as NE require that when considering the potential for in-combination effects, a competent authority should recognise that different proposal types ('sectors') and different pollutants (e.g., ammonia (NH<sub>3</sub>), nitrogen oxides (NO<sub>x</sub> and NO<sub>2</sub>)) can combine together to have the same or similar effect on a given area of habitat.</p> <ul style="list-style-type: none"> <li>○ It is generally well-established that the scope of an in-combination assessment is restricted to plans and projects which are 'live' at the same time as the assessment being undertaken. NE apply the following guidance to the scope of an in-combination assessment. <ul style="list-style-type: none"> <li>▪ The incomplete or non-implemented parts of plans or projects that have already commenced</li> <li>▪ Plans or projects given consent but not yet started</li> <li>▪ Plans or projects currently subject to an application for consent or proposed to be given effect</li> <li>▪ Projects that are the subject of an outstanding appeal</li> <li>▪ Ongoing plans or projects that are the subject of regular review and renewal</li> <li>▪ Any draft plans being prepared by any public body</li> <li>▪ Any proposed plans or projects that are reasonably foreseeable and/or published for consultation prior to application</li> <li>▪ Installations that were authorised after the most recent update of background pollution data on APIS</li> <li>▪ Is the site known to receive high levels of nutrient inputs from other non-atmospheric sources E.g., via water pathway?</li> </ul> </li> </ul>	<p><b>Amber</b></p>

<b>Table 2: Natural England's detailed updated advice</b>						
<b>NE key issue ref</b>	<b>Topic</b>	<b>Issue summary (C) – construction phase (O) – operational phase</b>	<b>NE commentary and advice on further details about the project to enable assessment or further evidence/assessment work required</b>	<b>NE comment on mechanism for securing resolution, e.g., mitigation/compensation</b>	<b>Matters that must be secured in the DCO</b>	<b>Risk: Red/ Amber /Green</b>
<b>River Eden SAC</b>						
Natural England's comments have been responded to by National Highways in the applicant's response to relevant representations, we have provided a copy of these responses in Part III, Table 3, alongside our updated response to them. However, given the importance of ensuring the correct design for any crossing of the River Eden SAC and then the need for Natural England to be appropriately consulted on changes to the EMP and any revision to the Habitats Regulations Assessment we have brought forward the below comments from our relevant representations.						
<b>2.1</b>	<b>River Eden SAC &amp; SSSI</b>	<b>Construction Phase:</b> The assessments of significant impact, particularly for the SAC and SSSI habitats and species are generally based on draft mitigation measures within a draft CEMP design and mitigation principles, rather than specific design and mitigation.	If these principles are not strictly adhered to, then this could change the outcome of the assessments. For example, if the bridge designs were to change over the Troutbeck, within the River Eden SAC, this could change the outcome of the assessments and HRA.	The design principles and mitigation measures within the CEMP need to be secured and adhered to during the construction phase of the works.	The mitigation measures need to progress past the draft stage and be updated to include all of the detailed design information required to understand the impacts of the designated features of the River Eden SAC & SSSI.	<b>Amber</b>
<b>2.2</b>	<b>River Eden SAC &amp; SSSI</b>	<b>Construction Phase:</b> The temporary works as part of the construction phase of the project need to be assessed and show detailed design information so that the potential impacts can be	The designs of the temporary bridge also need to be included and assessed further within the biodiversity chapter. There is a little more additional information in the HRA, however further specific information is required.	Additional information is required in the Environmental Statement, as mentioned; detailed design information, location and methodology for the construction of the temporary works.	The Mitigation measures and CEMP need to progress past the draft stage and be updated to include all of the detailed design information required to understand the impacts of the designated features of the River Eden SAC & SSSI.	<b>Amber</b>

		considered fully. The biodiversity chapter does not currently detail how and where the temporary bridges will be built, and they have therefore not been fully assessed for impacts in the HRA.		Required mitigation must be secured in the final CEMP.		
2.3	River Eden SAC & SSSI	<b>Construction Phase:</b> Sections 6.7.151 and 6.7.158 conclude that the assemblages of aquatic macrophytes and aquatic invertebrates within the Zone of Influence are considered of Local importance / Low Sensitivity and therefore are scoped out of further assessment.	However, given that the macrophyte assemblages present are within SAC habitats their importance should be higher. They are also sensitive to changes in the physical and chemical aspects of the river habitats. Section 6.7.156 states that sites with a macroinvertebrate assemblage indicative of a high conservation value were recorded. Aquatic invertebrates are a key ecological component of SAC/SSSI habitats, and therefore should be given higher importance in the assessment.	Given the need to increase the importance of the macrophyte and invertebrate assemblages in relation to the River Eden SAC, they should be brought forward into further assessments to ensure that they are thoroughly assessed, so that the proper conclusions are drawn on their impacts. Once assessed properly, the appropriate mitigation should be secured if there are impacts to the aquatic assemblages.	If needed mitigation measures and compensation measures should be recommend in the HRA and secured in the CEMP.	Amber
2.4	River Eden SAC & SSSI	Construction and Operational: Within Table 6-11: Embedded mitigation otter crossings. The table states that the <i>“Bridge with no impact on banks - preferred option. Box culvert second option”</i> . Natural England	The detailed design of all crossings and bridges needs to be shown and be part of the application in order to be able to assess the potential impacts to the designated features.	Natural England need to understand the design of the crossings to understand whether mitigation and compensation is necessary. For the crossing at NY 75040 16117, if the otter holt is destroyed then	The DCO needs to hold detailed design and evidence of each constructed structures – these all need to be assessed for potential impacts. The provision of replacement Otter habitat needs to be secured within the DCO to ensure no long term affects to the local otter population.	

		requires the detailed design of all bridges and crossings to be presented and discussed in order to assess the potential impacts to the designated features and protected species.		alternatives need to be provided. 6.10.275 states that two replacement holtts will be constructed.		
3.1	<b>Habitat Regulations Assessment Appropriate Assessment Section 1.4.22</b>	<p>Construction Phase: At present the EMP is in draft form, and specific and detailed mitigation measures are not finalised. Reassurance is also needed that if the project design principles are not adhered to (e.g., the design for an open span bridge with piers across the Troutbeck Floodplain) then the outcomes of the HRA may change.</p> <p>Whilst we agree the outcome of the HRA – that there will be no adverse effect on the integrity of the River Eden SAC, this is dependent on the design principles and mitigation measures in the draft CEMP not changing.</p>	Natural England require the design principles and mitigation measures in the draft CEMP to be secured and not change in order for us to agree to the outcomes in the HRA	The mitigation measures have already been drafted but they need to be secured.	Any measures used to inform the decision about the effects on the integrity need to be sufficiently secured and likely to work in practice. In the case of the DCO, measures used to inform the decision about the effects on the integrity will be secured through DCO itself, via (for example) the DCO Order Limits, Project Design Principles or Environmental Management Plan (EMP).	Amber

**PART III:**

**Natural England’s Written Representations – here we detail our response to the Applicant’s response to our Relevant Representations**

<b>Table 3: Natural England’s response to the applicants’ relevant representations response</b>			
<b>NE Reference/ Topic</b>	<b>NE Relevant Response</b>	<b>National Highways Response</b>	<b>NE Written response – 16/12/2022</b>
<b>NE RR-180</b>	<p>The assessments of significant impact, particularly for the SAC and SSSI habitats and species are generally based on draft mitigation measures within a draft CEMP design and mitigation principles, rather than specific design and mitigation.</p> <p>If these principles are not strictly adhered to, then this could change the outcome of the assessments. For example, if the bridge designs were to change over the Troutbeck, within the River Eden SAC, this could change the outcome of the assessments and HRA.</p> <p>The design principles and mitigation measures within the CEMP need to be secured and adhered to during the construction phase of the works.</p> <p>The mitigation measures need to progress past the draft stage and be updated to include all of the detailed design information required to understand the impacts of the designated features of the River Eden SAC &amp; SSSI.</p> <p>We have also provided comments on the mitigation proposed for the River Eden SAC below</p>	<p>It is acknowledged that the mitigation measures are considered preliminary and are based on the preliminary design of the Project as submitted in the DCO Application. They are based on the identified Likely Significant Effects of the Project as identified in the Environmental Statement (Document Reference 3.2, APP-043 to APP-059), which have been used to develop principles set out in the Environmental Management Plan (EMP) (Document Reference 2.7, APP-019) and the Project Design Principles (Document Reference 5.11, APP-302), both of which will be examined as part of the DCO submission and will become certified documents. This includes activity around the River Eden SAC &amp; SSSI.</p> <p>These two documents and their annexes will secure the mitigation required. Any future design developments, over the course of the DCO that may occur through the Examination process, will be required to take account of the mitigation outlined in these documents and will not result in effects worse than that which was assessed within the ES.</p>	<p>Natural England note that the EMP and Project Design Principles will become certified documents.</p> <p>We also note that any future design developments, over the course of the DCO that may occur through the Examination process, will be required to take account of the mitigation outlined in these documents and will not result in effects worse than that which was assessed within the ES. We are still concerned that there may be design and mitigation changes after the examination process.</p> <p>However, we recognise that there will be a second iteration of the EMP on which we will be consulted, and that will need SoS approval. This needs to contain more detail and specific mitigation.</p>

	<p>in Table 1 and Table 2 and are satisfied that if our comments are taken on board and the biodiversity priorities are secured, and the design and mitigation principles are adhered to (and not subsequently amended) then there should be no adverse effect on integrity of the River Eden SAC. Further information is needed to understand the impacts and design of the construction works and any temporary structures (in particular the temporary bridge over Troutbeck) in relation to the River Eden SAC and its designated features.</p> <p>It should be noted that our conclusion of no adverse effect on integrity may change if the guidance we have provided on the mitigation and design principals is not followed appropriately.</p>	<p>It should be noted that Article 53 of the draft DCO (Document Reference 5.1, APP-285) requires that the EMP is developed into a second iteration EMP (in consultation with various parties) (or EMPs – there may be multiple second iteration EMPs applicable to different parts of the scheme) and then submitted to the Secretary of State for approval prior to the start of works. This second iteration EMP will contain detailed management plans (where relevant) that have been informed by the detailed design and construction methodologies that have not yet been developed, including in relation to biodiversity matters. Compliance with an approved second iteration EMP is secured by article 53 and as such is a legally enforceable obligation.</p>	<p>Any changes in the EMP that relate to the River Eden SAC will need to be addressed in an updated HRA.</p>
<p><b>NE RR-180</b></p>	<p>The temporary works as part of the construction phase of the project need to be assessed and show detailed design information so that the potential impacts can be considered fully. The biodiversity chapter does not currently detail how and where the temporary bridges will be built, and they have therefore not been fully assessed for impacts in the HRA.</p> <p>The designs of the temporary bridge also need to be included and assessed further within the biodiversity chapter. There is a little more additional information in the HRA, however further specific information is required.</p> <p>Additional information is required in the Environmental Statement, as mentioned; detailed design information, location and methodology for</p>	<p>At the time of writing the Environmental Statement (Document Reference 3.2, APP-043 to APP-059) the planning of the construction phase of the Project was ongoing, as outlined in Environmental Statement Chapter 2: The Project (Document Reference 3.2, APP-045). The specific details of construction methodologies and practices were not finalised and will not be until the detailed design is complete, which is currently ongoing.</p> <p>Where construction methodologies and practices were not yet fixed, the EIA considered the full range of approaches that could be taken or considered the worst case for environmental effects. The Environmental Statement therefore assumes a reasonable worst-case scenario where the appropriate level of detail was not</p>	<p>Natural England note that the specific details of construction methodologies and practices were not finalised at the time of the DCO application and will not be until the detailed design is complete, which is currently ongoing. We assume that the detailed design will be complete by the time the second iteration of the EMP is consulted on and agreed by SoS.</p>

	<p>the construction of the temporary works. Required mitigation must be secured in the final CEMP. The Mitigation measures and CEMP need to progress past the draft stage and be updated to include all of the detailed design information required to understand the impacts of the designated features of the River Eden SAC &amp; SSSI.</p>	<p>available at the time of writing in order to allow for a full assessment of the potential impacts. Each technical chapter of the Environmental Statement outlines the assessment assumption and limitations for any such instances to ensure that a reasonable worst-case scenario has been assessed. In turn any variations to the construction approach should not result in likely significant adverse effects over and above those reported within the Environmental Statement.</p> <p>The Environmental Management Plan (EMP) (Document Reference 2.7, APP-019) sets out mitigation and restrictions in construction activities around watercourses (Annex C2 Working in Watercourses Method Statement, Document Reference 2.7, APP-037) and in particular working around the River Eden SAC and SSSI (Annex C1 Working in and Near SAC Method Statement Document Reference 2.7, APP-036).</p> <p>It should be noted that article 53 of the draft DCO (Document Reference 5.1, APP-285) requires that the EMP is developed into a second iteration EMP (in consultation with various parties) (or EMPs – there may be multiple second iteration EMPs applicable to different parts of the scheme) and then submitted to the Secretary of State for approval prior to the start of works. This second iteration EMP will contain detailed management plans (where relevant) that have been informed by the detailed design and construction methodologies that have not yet been developed, including in relation to biodiversity matters. Compliance with an approved second iteration</p>	
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		EMP is secured by article 53 and as such is a legally enforceable obligation.	
<b>NE RR-180</b>	<p>Sections 6.7.151 and 6.7.158 conclude that the assemblages of aquatic macrophytes and aquatic invertebrates within the Zone of Influence are considered of Local importance / Low Sensitivity and therefore are scoped out of further assessment.</p> <p>However, given that the macrophyte assemblages present are within SAC habitats their importance should be higher. They are also sensitive to changes in the physical and chemical aspects of the river habitats. Section 6.7.156 states that sites with a macroinvertebrate assemblage indicative of a high conservation value were recorded. Aquatic invertebrates are a key ecological component of SAC/SSSI habitats, and therefore should be given higher importance in the assessment.</p> <p>Given the need to increase the importance of the macrophyte and invertebrate assemblages in relation to the River Eden SAC, they should be brought forward into further assessments to ensure that they are thoroughly assessed, so that the proper conclusions are drawn on their impacts. Once assessed properly, the appropriate mitigation should be secured if there are impacts to the aquatic assemblages.</p> <p>If needed mitigation measures and compensation measures should be recommend in the HRA and secured in the CEMP.</p>	<p>The valuation of the aquatic macroinvertebrate and macrophyte assemblages has been undertaken in line with Table 3.9 in DRMB LA108 Biodiversity, as described in the Environmental Statement Appendix 4.1 Environment Impact Assessment Scoping Report Table 7-10 and Table 7-11 (Document Reference 3.4, APP-148).</p> <p>It was considered that the loss of these populations within the project Zol (which is not expected) would not adversely affect the conservation status or distribution of the species at a county or unitary authority scale. Potential impacts (in consideration of secured mitigation) to the River Eden SAC and River Eden and Tributaries SSSI are assessed in 6.10.6 of Environmental Statement Chapter 6 Biodiversity (Document Reference 3.2, APP-049), and the Habitats Regulation Assessment (Habitat Regulations Assessment Stage 2 Statement to Information Appropriate Assessment (Document Reference 3.6, APP-235). It is considered that the construction phase mitigation and the design of the watercourse crossings, as described in the HRA and secured in the Environmental Management Plan (Document Reference 2.7, APP-019) REAC D-RDWE-01 and Annex B7 Ground and Surface Water Management Plan (Document Reference 2.7, APP-027) and within the Project Design Principles (Document Reference 5.11, APP-302) will safeguard the aquatic macroinvertebrates and macrophytes assemblage within the project Zone of Influence.</p>	NE understand that the impact on the aquatic macrophytes and invertebrates is considered within the SSSI/SAC sections of the ES, EMP and HRA. Our comments explain that given that the macrophyte invertebrates can be within internationally / nationally important sites, they should be given due weighting in this section of the ES.



		No compensation measures are considered to be required for either species group.	
<b>NE RR-180</b>	<p>Justification needs to be given to understand why the Asby Complex SAC and Ravensworth Fell SSSI has been scoped out of the air pollution assessments given that they are within 200m of the Affected Road Network.</p> <p>Further evidence needs to be provided to understand why this SAC and SSSI have been scoped out and needs to be referenced within section 6.10.469</p> <p>Natural England will be able to comment on mitigation / compensation if it is needed once the evidence asked for is provided.</p> <p>If needed mitigation and compensation measures will need to be assessed in the HRA and secured within the DCO.</p>	Asby Complex SAC and Crosby Ravensworth Fell SSSI were scoped out of further assessment although the designated site falls within 200m of the ARN. Both locations were modelled to have a positive change as reported in Appendix 5.4 of the Environmental Statement (Document Reference 3.2, APP-153) as a result of changing traffic flows along the ARN. Therefore, they are not expected exceed the 1% threshold for adverse impacts where a significant adverse effect may occur, and no further assessment is required.	Natural England note the assessment and the declining traffic flows, we have removed this comment in Table 1 above, this is now agreed.
<b>NE RR-180</b>	<p>Construction Phase: At present the EMP is in draft form, and specific and detailed mitigation measures are not finalised. Reassurance is also needed that if the project design principles are not adhered to (e.g., the design for an open span bridge with piers across the Troutbeck Floodplain) then the outcomes of the HRA may change. Whilst we agree the outcome of the HRA – that there will be no adverse effect on the integrity of the River Eden SAC, this is dependent on the design principles and mitigation measures in the draft CEMP not changing.</p>	It is acknowledged that the mitigation measures are based on the preliminary design of the Project as submitted in the DCO Application. They are based on the identified Likely Significant Effects of the Project as identified in the Environmental Statement (Document Reference 3.2, APP-044), which have been used to develop principles set out in the Environmental Management Plan (Document Reference 2.7, APP-019) and the Project Design Principles (Document Reference 5.11, APP-302), both of which will be examined as part of the DCO submission and will become certified documents.	Natural England note that the specific details of construction methodologies and practices were not finalised at the time of the DCO application and will not be until the detailed design is complete, which is currently ongoing. We assume that the detailed design will be complete by the time the second iteration of the EMP is consulted on and agreed by SoS.

	<p>Natural England require the design principles and mitigation measures in the draft CEMP to be secured and not change in order for us to agree to the outcomes in the HRA</p> <p>The mitigation measures have already been drafted but they need to be secured.</p> <p>Any measures used to inform the decision about the effects on the integrity need to be sufficiently secured and likely to work in practice. In the case of the DCO, measures used to inform the decision about the effects on the integrity will be secured through DCO itself, via (for example) the DCO Order Limits, Project Design Principles or Environmental Management Plan (EMP).</p>	<p>These two documents and their annexes will secure the mitigation required. Any future design developments, over the course of the DCO that may occur through the Examination process, will be required to take account of the mitigation outlined in these documents and will not result in any worsening of effects identified within the ES.</p> <p>It should be noted that article 53 of the draft DCO (Document Reference 5.1, APP-285) requires that the EMP is developed into a second iteration EMP (in consultation with various parties) (or EMPs – there may be multiple second iteration EMPs applicable to different parts of the scheme) and then submitted to the Secretary of State for approval prior to the start of works. This second iteration EMP will contain detailed management plans (where relevant) that have been informed by the detailed design and construction methodologies that have not yet been developed, including in relation to biodiversity matters. Compliance with an approved second iteration EMP is secured by article 53 and as such is a legally enforceable obligation.</p>	
<p><b>NE RR-180</b></p>	<p>Environmental Statement Chapter 6: Biodiversity</p> <p><b>6.7.170:</b></p> <p>This section states: “that it might be expected that there would be an overall reduction in the extent of the heavily farmed agricultural land in the surrounding landscape, potentially alongside increases in woodland cover. This is unlikely to increase the value of biodiversity features currently identified by 2029 due to the time taken for newly created habitats to mature”.</p>	<p><b>6.7.170:</b></p> <p>Woodland habitats take at least 30 years to establish. Therefore, based on the assumption that any theoretical woodland planting that may occur before 2029 is a maximum age of 7 years, it would be yet to reach its maximum biodiversity value. The quantum and type of enhancement planned for Troutbeck is not yet known and therefore cannot be accurately assessed within the context of the A66.</p>	<p>6.7.10. Thank you for providing Natural England with this further information.</p> <p>6.9.25. Natural England encourage National Highways to seek to achieve as many enhancement opportunities as possible.</p> <p>6.10.11, Natural England will continue to check further justifications in the ES and EMP as they become available.</p>

	<p>There are current plans to carry out river restoration work at Troutbeck, with evidence that suggests that the biodiversity and geomorphology generally recovers very quickly after restoration and will therefore be improved by 2029. Further clarification is needed to understand if there is evidence that shows why the decrease in intensely farmed agricultural land would not have a positive effect on biodiversity features as mentioned in this paragraph.</p> <p><b>6.9.25:</b> This section details some enhancement opportunities that may be possible. Many of these will have biodiversity benefits and will provide indirect benefits to the River Eden SAC, including some of its designated species. However, the Environmental Statement does not say whether these measures will definitely be carried out. The environmental statement needs to state which mitigation and enhancement opportunities that will be carried out and secured in order for Natural England to be able to assess whether the mitigation and compensation is appropriate.</p> <p><b>6.10.11:</b> When discussing the air quality impacts to the River Eden, this section states that: “When considering the results of the air quality modelling it should be noted that whilst change in deposition rate is a useful metric to understand the net increase in pollutants in the air, this metric is less applicable to this aquatic habitat type. Aquatic plants that are a component of the vegetation community are submerged for the majority of the year due to their growth form,</p>	<p>However, it is not disputed that (1.) Habitat restoration works at Troutbeck will likely result in long term biodiversity enhancement; and (2.) any woodland planting within formally arable land will result in enhanced biodiversity once the woodland planting and understorey become established. Due to there being no known date of any theoretical woodland planting it was considered a suitable precaution that, if planted in the next 7 years, it would not be substantially established to provide a significant enhancement to biodiversity within the context of the A66. However, as the woodland matures towards 30 years and beyond, its biodiversity value would increase above that of arable habitats.</p> <p>For the potential enhancement opportunities which are outlined within the Environmental Statement Chapter 6 Biodiversity (Document Reference 3.2, APP-049), there is no legal requirement for them to be implemented into the final design of the project. They are disclosed within the Environmental Statement so that they are possible within the remit of the project. However, the DCO is not legally required to ensure the implementation of the enhancement measures and the measures have been identified as opportunities to be investigated as the design develops throughout the DCO process.</p> <p><b>6.9.25</b> All easily achievable with the potential exception of “Removal of redundant culvert on Eastfield Dike associated with the MOD tank turning area. The current Flood Risk Assessment is based on modelling that assumes the presence of this</p>	<p>6.10.16, Natural England acknowledge the Appendices where the Temple Sowerby impacts were assessed.</p> <p>6.10.27 &amp; 6.10.28 Natural England cannot find a National Highways response to these two points.</p> <p>6.10.478 Natural England acknowledge the points made here, we did agree in the workshop on 22/04/2022 that the temporary bridge should be open span and that the haul road will need to be a flood plain level. We wait to see that this extra detail and information is included within the second iteration of the EMP and the detailed project design.</p> <p>6.11.5 Natural England would welcome further discussion on this point. Where there is an obvious pathway to the River Eden SAC, and construction, there ought to be frequent measuring of turbidity (sediment) to ensure that the mitigation that is in place is working as it should, and that if high levels of sediment are found within the watercourse, then work is stopped to address any issues.</p>
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	<p>consequently they are regularly inundated and flushed during modest flood events.”  Natural England understand the argument made, but find this comment to be quite vague, can scientific evidence that can support this comment and highlight why in this case N depositions will not lead to a nutrient impact on the river be provided.</p> <p><b>6.10.16:</b>  This section states that “The potential for hydrological impacts has been reviewed and is identified as not likely, due to the new alignment cuttings being lower than the site, and therefore it is not possible for a hydrological impact upon this site”.  Evidence should be provided here that shows that the assessment has assessed whether there will be an impact on the local water table, and thus having a hydrological impact on the Temple Sowerby Moss SSSI</p> <p><b>6.10.27:</b>  This section refers to loss of woodland at Skirsgill, including trees on the banks of the River Eden. This ought to be reflected in the River Eden SAC/SSSI section, given that is a loss of riverbank habitat.</p> <p><b>6.10.28</b> states that mitigation will be in place, including fencing to protect the remaining trees. In addition, any riverbank trees that are lost should be replaced to continue to provide dappled shade conditions along the river (though not necessarily at the new outfall location). The provision of</p>	<p>culvert and the acceptability of this mitigation, in terms of flood risk, will need to be fully assessed during detailed design” and “A 300m length of Mains Gill is within a culvert. There is potential to daylight this section by removing the pipe culvert reconnecting habitats locally. The value of this mitigation, in terms of fish, should be assessed noting that the existing A66 culvert presents a barrier to the upper reaches of Mains Gill and that this section is ephemeral”.</p> <p><b>6.10.11</b>  It is noted that the flushing” argument is currently based on the professional judgment of National Highways. Flushing of nitrogen from exposed macrophytes during moderate high flow river events was discussed as part of the HRA Task Working Group, where it was agreed that this seemed reasonable, but Natural England suggested that further evidence should be sought. National Highways continues to engage with Natural England on this point and will seek to clarify and justify the methodology and assessment undertaken in the ES as part of this process.</p> <p><b>6.10.16</b>  The potential impact to Temple Sowerby Moss SSSI was considered in Appendix 14.6 Hydrogeological Impact Assessment of Chapter 14 Road Drainage (Document Reference 3.4, APP-225). The assessment concludes that the designated area is not within the zone of influence of any cuttings (area of predicted groundwater drawdown), and therefore no impact on baseflow is anticipated. No impacts to surface</p>	<p>6.11.7 Natural England have not seen a National Highways response to this point. Natural England still recommends that the effluent from the attenuation ponds is monitored regularly to ensure that the ponds continue to function as they should</p>
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<p>replaced habitat / trees should be secured within the mitigation and compensation measures.</p> <p><b>6.10.315:</b> Natural England do not support the use of LA105 as it not HRA compliant, please see comments above in Table 1 for our comments on Air Quality.</p> <p><b>6.10.335:</b> Please see our comments in the Table below for the Habitats Regulation Assessment, which are relevant to this section of the Biodiversity Chapter.</p> <p><b>6.10.359-6.10.466:</b> These sections assess the impact of air pollution on many woodland designated sites and priority habitats. Whilst the comments about the woodland and individual trees are discussed, the trees/woodland need to assess for their lichen and lower plant communities, which are much more susceptible to nitrogen deposition.</p> <p>Other woodland sites in the vicinity (beyond 200m of the ARN or red line boundary) do have important lichen and lower plant communities. They comprise similar woodland communities and underlying geology to those sites assessed in the Environmental Statement, therefore there is the potential for these sites to also have important lichen and lower plant species present, which should be assessed.</p> <p><b>6.10.478:</b> Whilst the main permanent bridges have been designed to be open plan (across the whole floodplain in the case of Troutbeck and a couple</p>	<p>water in the area are predicted, due to no surface water features adjacent or downstream of the scheme linked to Temple Sowerby Moss SSSI and therefore no potential pollutant pathway, see Section 14.6.3 of ES Appendix 14.6.</p> <p>In regard to the use of LA105 as per 6.10.315 it is acknowledged that there is ongoing engagement between National Highways and Natural England on the topic of Air Quality methodology and the adequacy of LA105. The woodland designated sites note in 6.10.359 - 6.10.466 were assessed utilising desk study information as part of the assessment of air pollution impacts within the Environmental Statement. Following ground truthing surveys undertaken in October 2022, the field survey data supports the desk study information and habitats assumed to be present as part of the assessment. Whilst it is acknowledged that the woodland sites may support lichen and lower plant communities more susceptible to nitrogen deposition, the rational for the assessment outcomes remain the same and subsequently any potential impact from changes in AQ are not deemed to have a significant effect on the sites.</p> <p><b>6.10.478 and 6.11.5</b> It is noted that the temporary bridge over Trout Beck and the temporary and construction phase works have the potential to have a detrimental effect of the River Eden SAC. The HRA (Document Reference 3.6, APP-235) assesses the construction phase impacts considering</p>	
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	<p>of becks in the Appleby – Brough scheme), the impact of the temporary bridge across Troutbeck needs to be assessed.</p> <p>Natural England requires the detailed design and whether a temporary causeway across the floodplain will be necessary to assess the impacts to Troutbeck.</p> <p><b>6.11.5:</b> Natural England acknowledge that National Highways recommends monitoring visits during the construction phase be carried out every six months. Natural England suggest that these monitoring visits should be much more frequent through the construction areas with the highest impacts and impact pathways the designated sites.</p> <p>The water quality in terms of sediment and turbidity will need regular, frequent monitoring to ensure that the mitigation measures that are in place are preventing sediment run-off and pollution incidents.</p> <p><b>6.11.7:</b> Natural England welcome the need to monitor habitat creation schemes and recommend that the effluent from the attenuation ponds needs to be monitored to ensure that the ponds continue to function as they should.</p>	<p>proposed mitigation. The detailed design of the temporary bridge was not available at the time of submission and will form part of the Project detailed design. However, the requirement for a temporary bridge over Trout Beck to facilitate the construction of the permanent viaduct was discussed with Natural England in the construction mitigation workshop (22 April 2022) and it was agreed that this would need to be open span (i.e., from bank top to bank top) and that the haul road would need to be at flood plain level to reduce potential for changes to fluvial geomorphological process during construction.</p> <p>Note paragraph 6.11.4 4 of Chapter 6 Biodiversity within the Environment Statement (Document Reference 3.2, APP-049) “A monitoring visit will be carried out prior to the commencement of construction works at each location to ensure appropriate protective fencing and other required mitigation measures are in place.” Subject to this measure being implemented and subsequent visits being carried out on a 6-month rotation, it is considered that suitable safeguards will be in place for the majority of habitats. However, National Highways are willing to discuss monitoring frequency with Natural England through ongoing engagement.</p>	
<b>NE RR-180</b>	<p>3.6 Habitats Regulations Assessment: Stage 2 Statement to Inform Appropriate Assessment</p> <p><b>1.4.5:</b></p>	<p>Potential impacts (in consideration of secured mitigation) to the River Eden SAC and River Eden and Tributaries SSSI are assessed 6.10.6 of Chapter 6 Biodiversity (Document Reference 3.2, APP-049), and the Habitats Regulation</p>	<p>Natural England acknowledge the comments made in regard to the HRA AA and the temporary crossing over Troutbeck. Please see comments above regarding the</p>

<p>Further clarification is needed here to understand why all of the ecological receptor locations have been modelled at 0m.</p> <p><b>1.4.19:</b> Natural England would expect no deterioration in water quality, further information is required here to understand whether the Highways England Water Risk Assessment Tool (HEWRAT) takes into consideration water quality when implementing suitable drainage system and mitigation measures.</p> <p><b>1.5.17:</b> The temporary bridge over Troutbeck is mentioned here but there are no available details. Natural England required the detailed design of the bridge and information regarding whether it will affect the natural function of the river to be presented and referred to in the HRA. The temporary and construction phase works do have the ability to have a detrimental effect on the SAC and therefore should be discussed in the HRA.</p> <p><b>1.5.24-1.5.25:</b> This section concludes no land take is required inside the SAC boundary however section 6.10.27 in the Environmental Statement refers to the loss of woodland at Skirsgill, including riparian trees, this should be discussed here.</p> <p><b>1.5.92:</b> The statement is vague and whilst a reasonable argument, this requires some evidence/reference/detail to have the necessary level of confidence. However, if we use this argument for all the Diffuse and point source pollution in the river i.e., that it will all be flushed</p>	<p>Assessment (3.6 Habitat Regulations Assessment Stage 2 Statement to Information Appropriate Assessment) (Document Reference 3.6, APP-235). It is considered that the construction phase mitigation and the design of the watercourse crossings, as described in the HRA and secured in the Project Design Principles (Document Reference 5.11, APP-302) will safeguard the aquatic macroinvertebrates and macrophytes assemblage within the project Zone of Influence. No compensation measures are considered to be required for either species group.</p> <p>A height of 0m has been used for modelling ecological receptors as ground level is closer to the road/source of the emissions and is therefore considered a reasonable worst case.</p> <p>No deterioration of water quality is predicted as a result of the Project. During construction measures outlined within the Environmental Management Plan (EMP) (Document Reference 2.7, APP-019) will be implemented and monitored. During operation the HEWRAT tool has been used to guide the design of the drainage system to be compliant with the Environmental Quality Standards (EQSs) for the receiving watercourses. The HEWRAT assessment undertaken on the drainage design demonstrated no adverse impact. Future revisions of the drainage design will be subject to updated HEWRAT assessments to maintain compliance.</p>	<p>temporary crossing over Troutbeck and the mitigation and detailed design needed.</p> <p><b>1.5.24-1.5.25</b> Natural England note the comments and agree that the riparian habitat subject to alteration/loss of trees is not the qualifying SAC woodland habitat type (i.e., 91E0 Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i>). However, riparian trees are an important component of the river habitat and provide shade and different habitat niches to many of the SAC species. If trees are felled within the site, replacement trees should be planted on the riverbank as close as possible.</p> <p>The SAC Supplementary Advice document states that “Watercourses with a high degree of naturalness are governed by dynamic processes which result in a mosaic of characteristic physical habitats or biotopes, including a range of substrate types, variations in flow, channel width and depth, in-channel and side-channel sedimentation features (including transiently exposed sediments), bank profiles (including shallow and steep slopes), erosion features (such as cliffs) and both in-channel and bankside (woody and herbaceous) vegetation cover. All of these biotopes, and their characteristic patterns within the river corridor, are important to the full expression of the biological community” and “A mosaic of natural and semi-natural riparian vegetation types provides</p>
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	<p>out of the system and therefore not be a problem, why are our rivers unfavourable for nutrient pollution, which can cause changes in macrophyte composition, reduction in Biological Oxygen Demand (BOD), increase in algae which can then have adverse effects on dependent species etc. But Phosphorus tends to be the limiting factor in these freshwater river systems, and the nutrient input from the air pollution is mainly Nitrogen.</p> <p><b>1.5.98:</b> An existing exceedance of Nitrogen is not a justification to permit further additional emissions (see Dutch Nitrogen Judgement). However, further evidence and discussion needs to be supplied with regards to the impact on the ecology / biodiversity of Nitrogen in comparison to Phosphorus. Phosphorus is likely to be the limiting factor.</p> <p><b>1.5.514:</b> Please see our comments for section 1.4.19</p> <p><b>1.5.157:</b> The temporary bridge design principles have been included and discussed here, clarification is needed to understand whether these have been secured and firmly agreed</p> <p><b>1.5.519:</b> Importantly, the bridge design should not prevent the river (Troutbeck) achieving favourable condition, and there is a proposed river restoration scheme, that should not be compromised by the design. The design principles described should ensure that this is the case.</p> <p><b>1.5.182:</b></p>	<p>Regarding 1.5.92 it is noted that the temporary bridge over Trout Beck and the temporary and construction phase works have the potential to have a detrimental effect on the River Eden SAC. The HRA (Document Reference 3.5, APP-234 and Document Reference 3.6, APP-235) assesses the construction phase impacts considering proposed mitigation. The detailed design of the temporary bridge was not available at the time of submission and will form part of the detailed design. However, the requirement for a temporary bridge over Trout Beck to facilitate the construction of the permanent viaduct was discussed with Natural England in the construction mitigation workshop (22 of April 2022) and it was agreed that this would need to be open span (i.e., from bank top to bank top) and that the haul road would need to be at flood plain level to reduce potential for changes to fluvial geomorphological process during construction.</p> <p>There will be localised alteration of the riparian zone because of the attenuation basin discharges to the River Eamont (M6 Junction 40 to Kemplay Bank) and Trout Beck (Temple Sowerby to Appleby). The discharges will enter these SAC watercourses via the riparian zone. Loss of trees associated with the construction of the drainage channel will be avoided/minimised as far as possible. However, the riparian habitat subject to alteration/ loss of trees was not identified to be qualifying SAC woodland habitat type (i.e., 91E0 Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, <i>Alnion incanae</i>, <i>Salicion albae</i>). It is considered</p>	<p>conditions for all characteristic in-channel and riparian biota to thrive, creating patches of tall and short riparian swards, a mixture of light and shade on the river channel, and tree root systems and a supply of large woody debris that add channel complexity. Patchy tree cover provides shade protection against rising water temperatures caused by climate change”.</p>
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	<p>The shape of the flood compensation storage area is very rectangular / regular. Natural England recommend that this takes a much more natural shape, however, if it is changed, it should be taken into consideration that this may impact all of the geomorphological and hydrological modelling</p> <p><b>1.6.31:</b> Please see above 'red' issue in relation to Air quality, a pre-existing breach of 1% does not mean the site can be scoped out of further assessments.</p>	<p>that the minor alteration/loss of trees (if required) would not have a significant effect in the function of the woodland and is not considered to have any likely significant effect on any qualifying features of the SAC. The HRA will be updated to reflect the above and the minor loss of habitat inside the SAC boundary.</p> <p>Where outfalls discharge to natural banks these will be designed to be open ditches (i.e., no new hard outfalls will be created). They will be designed to facilitate erosion patterns, to allow the natural migration of watercourses to continue. Where outfalls discharge at a location with existing hard banks, they will be designed to tie into the existing hard structure.</p> <p>It is noted that the flushing argument is currently based on the professional judgment of the Project team. Flushing of nitrogen from exposed macrophytes during moderate high flow river events was discussed as part of the HRA Task Working Group, where it was agreed that this seemed reasonable, but Natural England suggested that further evidence should be sought. Engagement will continue with Natural England through the Statements of Common Grounds process to ascertain where there is a lack of clarity on where certain conclusions are documented.</p> <p>The assessment has been made considering the Dutch Nitrogen case. The assessment does not use the exceedance of nitrogen to justify additional inputs. Engagement will continue with Natural England through the Statements of</p>	
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		<p>Common Grounds process to ascertain where there is a lack of clarity on where certain conclusions are documented.</p> <p>The design principles for the viaduct and temporary bridge are secured in the Project Design Principles (Document Reference 5.11, APP-302).</p> <p>1.5.82 – Flood compensation areas have been shown in draft at this stage to prove the concept is viable. These areas will be developed/refined at detailed design stage, so they blend into the natural landscape. This is secured in Table 4.1 of (Document Reference 5.11, APP-302) Project Design Principles. Flood modelling reports (including flood compensation areas) are in Annex E Environmental Statement Appendix 14.3 Water Quality Assessment, (Document Reference 3.4, APP-222).</p> <p>The site has not been scoped out of further assessment as a result of the 1% breach. Whilst the assessment acknowledges the 1% breach within the affected area of the site, further assessment considers that the actual area of impact in the context of the whole SAC is considered negligible (approximately 0.01% of total blanket bog area).</p>	
<b>NE RR-180</b>	<p>General</p> <p>Many of the biodiversity (and other) sections refer to detailed method statements to be agreed in the future, and the detail is not included in the EMP at this stage – only principles that will be followed. This approach still leaves lot to be agreed at a</p>	<p>National Highways acknowledge the points raised by Natural England. As set out in the Draft Development Consent Order (DCO) (Document Reference 5.1, APP- 285) and the Environmental Management Plan (EMP) (Document Reference 2.7, APP-019), the EMP</p>	<p>Natural England acknowledge these points and also acknowledge that we will be consulted on the second iteration EMP and the detailed design, where our concerns should be addressed.</p>

	<p>later stage. It needs to be ensured that all of the methodologies are picked up in the HRA, and that all mitigation measures in the HRA are included in the EMP, Method Statements and other documents. There needs to be a process in place to reassess the impacts on the River Eden SAC if the plans materially change between approval and construction.</p>	<p>is expected to evolve as the detailed design progresses and more detail will be provided within the method statements and other management plans required to be worked up in more detail further to various commitments contained in the Environmental management Plan (EMP. These will form part of the second iteration EMP, which Natural England will be consulted upon before it is submitted to the Secretary of State for approval prior to the start of works (as required by article 53 of the DCO (meaning this would be a legally enforceable obligation placed on National Highways, should the DCO be made). Section 1 of the EMP sets out in detail the consultation process that shall be implemented and highlights a number of plans that specifically require further detailed consultation with the regulatory authorities, including Natural England.</p> <p>The Statement to Inform Appropriate Assessment (Document Reference 3.6, APP-235) sets out clearly the mitigation that is required during construction and the assumptions made regarding construction processes. The outline Method Statement for working within the SAC (Annex C2 to the EMP, Document Reference 2.7, APP-037) sets out commitments that must be worked up in more detail and complied with prior to the start of works. See Register of Environmental Actions and Commitments (REAC) reference MW-BD-15 within the EMP (Document Reference 2.7, APP-019)</p>	
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		<p>In response to points raised by both the Environment Agency and Natural England, the following bullet point shall be added to the list within the Register of Environmental Actions and Commitments MW-BD-15 within the EMP (Document Reference 2.7, APP-019) in terms of evidence that must be included in the above referenced method statement:</p> <p>105) Evidence to demonstrate that the Method Statement complies with the assumptions and requirements utilised to inform the Habitats Regulations Assessment Stage 2 Statement to Inform Appropriate Assessment (SIAA) (Document Reference 3.5, APP-234) and (Document Reference 3.6, APP-235)</p> <p>This change will be included in an updated draft EMP that will be submitted to the examination along with the updated DCO at Deadline 2 (unless requested earlier by the ExA). It is hoped this addresses Natural England's concerns and this will be discussed with it in more detail and agreement captured as part of the Statement of Common Ground process as appropriate. Ultimately, the project must be constructed within the parameters set by the DCO and the supporting management documents (such as the EMP and Project Design Principles (5.11, APP-302)). Any departure from this would not be permitted.</p>	
<b>NE RR-180</b>	<p><b>D-RDWE-11</b> This refers to the potential requirement of flow control structures and that they should not adversely affect upstream and downstream continuity (e.g., fish passage). They should also not impact on sediment movement or alter the</p>	<p>The flow control structures referred to in this commitment relate to controlling flow out of flood compensation storage and will be outside of existing river channels. See paragraph 14.8.85 of the Environmental Statement (Document Reference 3.2, APP-057) for further details.</p>	<p>Thank you for the clarification. The scheme should endeavour to design the flood compensation storage areas to function as naturally as possible without the need for flow control structures when possible.</p>

	geomorphology e.g., create scouring etc. What are the locations of these? Will there be any located in the River Eden SAC or its tributaries?		
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**For the sections of the EMP below, Natural England agree and support the changes recommended by National Highways**

**MW-BD-02, MW-BD-18, C1.3.1, C1.2.9, C1.3.10, C1.4.10, C1.4.17, C1.4.18, Table 5 and 6 Annex B1 and Table 4-6. 0405.11**

**Natural England acknowledge the National Highway response for the sections of the EMP below**

**D-BD-04, D-BD-08, D-RDEW-05, D-RDWE-06, MW-RDW-09, M-RDWE-04, B1.21.51, Table 4-2. 0102.06 and D-RDWE- 12, 13 and 14**

**Natural England acknowledge these points and also acknowledge that we will be consulted on the second iteration EMP and the detailed design, where our concerns should be addressed.**

**MW-BD-15, C1.3.7 and C1.4.19**

