

A417 Missing Link
TR010056

8.4 Responses to the Examining Authority's Written Questions (ExQ1)

Planning Act 2008

APFP Regulation
Infrastructure Planning (Applications: Prescribed Forms and
Procedure) Regulations 2009

Volume 8

December 2021

Infrastructure Planning

Planning Act 2008

**The Infrastructure Planning
(Applications: Prescribed Forms
and Procedure) Regulations 2009**

A417 Missing Link

Development Consent Order 202[x]

Responses to the Examining Authority's Written Questions (ExQ1)

Regulation Number:	
Planning Inspectorate Scheme Reference	TR010056
Application Document Reference	8.4
Author:	A417 Missing Link

Version	Date	Status of Version
C01	December 2021	Deadline 1

Table of contents

	Pages
1 Introduction	1
1.1 Purpose of this document	1
2 Responses to the Examining Authority's First Written Questions	1
Appendices	i
Appendix A Natural England's response to HRA Screening Report letter	ii
Appendix B Air Quality Monitoring Data	iii

Table of Figures

No table of figures entries found.

Table of Tables

Table 2-1	Applicant's Response to the Examining Authority's First Written Questions	1
-----------	---	---

1 Introduction

1.1 Purpose of this document

- 1.1.1 The purpose of this document is to set out the National Highways (the Applicant) written responses to the Examining Authority's first written questions issued on 16 November 2021, relating to the A417 Missing Link scheme. These can be found in Table 2-1.

2 Responses to the Examining Authority's First Written Questions

Table 2-1 Applicant's Response to the Examining Authority's First Written Questions

Number	Directed to	Question	Applicant's Response
1.1 Miscellaneous and General			
1.1.1	Applicant	<p>General</p> <p>a) Does the rebranding of Highways England have any implications for the documentation submitted with the application?</p> <p>b) How should the Applicant be addressed in the Examination and subsequent report, does this have any wider impact?</p>	<p>a) Highways England was renamed as National Highways on 19 August 2021. This name change does not reflect any change in role or remit for the organisation. The change in name has no practical implications for project documentation, including that submitted as part of the DCO Application. All references to Highways England within project documentation should be taken to mean National Highways, in all instances.</p> <p>b) The Applicant should be addressed as National Highways in the Examination and subsequent report. This does not have any wider impact and any previous reference to Highways England within application documentation should be taken to mean National Highways in all instances.</p>
1.1.6	Applicant	<p>Options Appraisal</p> <p>a) Did the A417 Missing Link scheme receive full options appraisal prior to inclusion in the Road Investment Strategy?</p> <p>b) If so, whilst the NPSNN, 4.27 states that the Secretary of State (in such circumstances) does not need to consider option testing in this regard, 4.26 identifies there may be policy requirements, for example in Areas of Outstanding Natural Beauty where assessment of alternatives are required. Which alternative options are considered to be important and relevant to the ExA's decision-making process,</p> <p>c) which documents does the Applicant rely upon to fulfil this requirement and</p>	<p>a) Paragraph 4.27 of National Policy Statement for National Networks (NPSNN) provides that: <i>All projects should be subject to an options appraisal. The appraisal should consider viable modal alternatives and may also consider other options (in light of the paragraphs 3.23 to 3.27 of this NPS). Where projects have been subject to full options appraisal in achieving their status within Road or Rail Investment Strategies or other appropriate policies or investment plans, option testing need not be considered by the examining authority or the decision maker. For national road and rail schemes, proportionate option consideration of alternatives will have been undertaken as part of the investment decision making process. It is not necessary for the Examining Authority and the decision maker to reconsider this process, but they should be satisfied that this assessment has been undertaken.</i></p> <p>Section 2.1 of the Case for the Scheme (Document Reference 7.1, APP-417) provides a detailed explanation of the scheme's timeline, including at table 2-1 a summary table of the various options appraisals and consultations which have taken place during the scheme's development.</p> <p>The A417 Missing Link was included within the first Road Investment Strategy (RIS1) in December 2014. Following its inclusion in RIS1, the route of the current scheme was identified by Highways England (as then was) in its Preferred Route</p>

Number	Directed to	Question	Applicant's Response
		d) is the Applicant satisfied this assessment is sufficiently robust?	<p>Announcement in March 2019. The scheme was retained in the Government's Road Investment Strategy 2 (RIS2) when published in March 2020.</p> <p>Section 2.2 of the Case for the Scheme provides an explanation of the option identification, sifting and appraisal process carried out by Highways England following the scheme's inclusion in RIS1. Alternative modal improvements, and alternative route improvements elsewhere on the Strategic Road Network (SRN), which were considered are explained at 2.2.3 and 2.2.5 of the Case for Scheme. The remainder of chapter 2 of the Case for the Scheme describes the process by which the preferred route was announced, and subsequent public consultations, in more detail.</p> <p>The identification of schemes for RIS1 was based on a route-based strategies approach, following a recommendation of the November 2011 report A Fresh Start for the Strategic Road Network, which was accepted by Government in May 2012. A report was prepared summarising the evidence available to the Highways Agency (as then was) for the part of the SRN which includes the location of the scheme. That report was published in April 2014; Midlands to Wales and Gloucestershire Route Strategy Evidence Report. Section 1 of that report provides additional background on its context and purpose.</p> <p>Setting the Road Investment Strategy is a June 2014 publication by the Department for Transport (DfT), which summarises the manner in which it would set RIS1. Similar documents identifying the DfT's approach to the inclusion of schemes for RIS2 were published in December 2017, including:</p> <ul style="list-style-type: none"> - Connecting the Country – Planning for the Long Term; and - Highways England's analytical methods to inform proposals for the second Road Period (2020 – 2025). <p>National Highways has complied with its reporting requirements to DfT in respect of the road investment strategies. As a result of this question from the ExA, a request has been made of DfT for copies of any relevant background reports documenting its decisions to include and retain the scheme in RIS1 and RIS2. An update will be provided at the earliest opportunity.</p>

Number	Directed to	Question	Applicant's Response
			<p>The Applicant would reiterate that the process described in chapter 2 of the Case for the Scheme which lead up to the scheme's inclusion in RIS1, and the subsequent Preferred Route Announcement in March 2019, comprises a thorough options appraisal of the scheme by the Applicant.</p> <p>b) Chapter 2 of the Case for the Scheme (Document Reference 7.1, APP-417) provides a summary of the scheme's development and the options considered. Section 4 of the Scheme Assessment Report (Document Reference 7.4, APP-420) explains the options which were considered in the options appraisal carried out by Highways England following the inclusion of the scheme in RIS1. Further detail on the technical elements of that appraisal are provided in the Technical Assessment Report (Document Reference 7.9, APP-425). Further information can be found on that options appraisal in ES Chapter 3 Assessment of Alternatives (Document Reference 6.2, APP-034), and the Route Options Consultation Report (Document Reference 7.5, APP-421).</p> <p>Paragraph 4.26 of the NPSNN identifies other circumstances in which the consideration of alternatives may be relevant, in addition to any options appraisal pursuant to 4.27.</p> <p>One such case relates to the requirements of the EIA Directive, transposed into domestic law in this instance by the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. ES Chapter 3 provides a summary of the reasonable alternatives which have been considered for the purposes of those Regulations, an indication of the main reasons for the option chosen, taking into account the effects of the development on the environment.</p> <p>The requirements to consider alternatives in the context of the Water Framework Directive, or the Habitats Directive, do not arise in relation to this scheme. A derogation is not being sought under the Water Framework Directive for impacts on protected water bodies, nor are adverse effects on the integrity of a European site expected to occur in respect of the Habitats Directive. Further information on those matters can be found in ES Appendix 13.2 WFD compliance assessment (Document Reference 6.4, APP-398) and its Habitats Regulations Assessment: Statement to Inform Appropriate Assessment (Document Reference 6.5, APP-415).</p> <p>Another case where alternatives are relevant relates to paragraph 5.151 of the NPSNN, which expressly requires the consideration of alternatives for development</p>

Number	Directed to	Question	Applicant's Response
			<p>within an Area of Outstanding Natural Beauty. Chapter 7 of the Case for the Scheme provides the Applicant's case for compliance with that and associated paragraphs of the NPSNN, and why the cost of, and scope for, developing outside of the designated area, supports the Applicant's proposal.</p> <p>Finally, consideration of alternatives is also relevant in the context of demonstrating compelling case in the public interest for the compulsory acquisition of land. Section 5.5 of the Statement of Reasons (Document Reference 4.1, APP-024) explains the manner in which alternatives have been considered by the Applicant in respect of the compulsory acquisition of land.</p> <p>The Applicant's consideration of alternatives in the broadest sense has been ongoing from prior to 2014 and the inclusion of the scheme in RIS1, through the statutory consultations for the scheme between which significant changes were made in response to the first of those consultations, and up to the present day where refinements to impacts on individual landowners continue to be considered by the scheme where it remains feasible to make such refinements.</p> <p>Further details of that broader consideration of fine-grained alternatives by the project following the Preferred Route Announcement are included within the following documents, which are also relied on by the Applicant in that regard:</p> <ul style="list-style-type: none"> • Consultation Report (Document Reference 5.1), see in particular sections 7.4 and 10.4 • Cut and cover tunnel feasibility study (Document reference 8.6) • Walking, Cycling and Horse Riding Access across A417 Online Section file note (Document reference 8.8) • CCB Options Report (Document reference 8.5) <p>The ExA will be familiar with Mr Justice Holgate's summary of the circumstances in which an obligation to consider alternatives a "obviously material consideration" are provided by paragraphs 268 to 276 of his judgment in <i>R (Save Stonehenge World Heritage Site Limited) v Secretary of State for Transport</i> [2021] EWHC 2161 (Admin). The Applicant would suggest that all alternatives referred to in response to this question 1.1.6(b) would be capable of being important and relevant to the ExA's</p>

Number	Directed to	Question	Applicant's Response
			<p>and the Secretary of State's decision-making process; the equivalent of an obviously material consideration in the language of the Town and Country Planning Act cases referred to by Mr Justice Holgate in <i>Stonehenge</i>.</p> <p>c) The Applicant relies on the documents referred to above in response to questions (a) and (b) to meet the requirements of NPSNN for an options appraisal (paragraph 4.27), the broader consideration of alternatives in certain prescribed circumstances (paragraph 4.26) and any other alternative options which fall to be considered as an obviously material consideration.</p> <p>d) Yes, the Applicant is satisfied that the assessments outlined within parts (a), (b) and (c) of its responses to this question are sufficiently robust.</p>
1.1.7	Applicant	<p>Options Appraisal</p> <p>a) With regards to the Technical Appraisal Report [APP-425], it is stated (executive summary page 20) that between option 12 and option 30, Highway England's preference would be option 30 for a number of reasons, many of which are either highways or monetary based. How does this accord with the statement in the Design Summary Report that the landscape was a primary consideration in every design decision?</p> <p>b) The Scheme Assessment Report (SAR) [APP-420] states that Option 12 was developed at PCF Stage 1 as a landscape-led design. The same reassurances are not said about option 30. For what reason was option 30 conceived or designed?</p>	<p>a) The scheme vision is expressed within table 2.1 of the Technical Appraisal Report (TAR) (Document Reference 7.9, APP-425) as:</p> <p><i>"A landscape led highways improvement scheme that will deliver a safe and resilient free-flowing road whilst conserving and enhancing the special character of the Cotswolds AONB; reconnecting landscape and ecology; bringing about landscape, wildlife and heritage benefits, including enhanced visitors' enjoyment of the area; improving local communities' quality of life; and contributing to the health of the economy and local businesses."</i></p> <p>The option identification and sifting process is described from page 12 of the executive summary of the report. It highlights that the standard EAST tool – used by the Department of Transport for early stage sifting – was adapted for use on the A417 to include additional criteria to represent the scheme specific objectives including the landscape-led approach.</p> <p>The remainder of the executive summary outlines the large number of environmental assessments – including landscape assessments – to which the options identification and sifting process was subject. Page 16 records the outcome of those appraisals from a landscape perspective; that there was no notable difference between options 12 and 30 (see section 11.6 for further detail on the landscape assessments of the two options).</p> <p>The executive summary concludes in identifying the two options which were to be taken forwards to public consultation by Highways England as a result of the options</p>

Number	Directed to	Question	Applicant's Response
		<p>c) In the SAR, it states that “Those who identified their support for Option 30 amounted to 72% of all respondents, with an additional 8% stating their preference for Option 12.” Clarify what this means.</p> <p>d) In the SAR, it states that “there is limited variation in terms of overall residual environmental impacts between Option 12 and Option 30. Option 12 and Option 30 are recording the same level of significance in relation to air quality, cultural heritage, landscape, geology and soils, materials, noise and vibration, population and human health, and climate.” Landscape is not however mentioned as an environmental impact. Explain.</p> <p>e) Table 0.2 records the impacts on landscape being the same for both option 12 and option 30. Explain how this conclusion was reached.</p> <p>f) In the SAR executive summary, the reasons for selecting option 30 do not mention anything regarding ‘landscape-led’ approaches, with an emphasis on lower costs representing greater (monetised) benefits. Can the ExA be reassured that cost was not a prevailing or overriding factor in the decision-making process?</p>	<p>identification and sifting process described in the Technical Appraisal Report. The list of matters identified by the ExA on page 20 of the executive summary were distinguishing features between the two routes at that point in time in February 2018.</p> <p>A more detailed explanation of the decision which was subsequently taken by Highways England to proceed with option 30 – following a public consultation on the two options in February and March 2018 reported in the Route Options Consultation Report – are set out at section 10 of the Scheme Assessment Report (SAR) (Document Reference 7.4), with conclusions reached at section 11 of that report. That indicates that there is little to distinguish between the two schemes in terms of their landscape and visual impacts (paragraph 11.8.2), albeit option 30 would offer opportunities for landscape and environmental design development in diverting the strategic road network away from the Cotswolds escarpment (paragraph 11.8.5). Further landscape opportunities are identified at 11.8.7.</p> <p>The list of matters identified at page 20 of the executive summary of the February 2018 report should not be read in isolation to the wider decision-making process described in this response. When read in that context, the list of matters is consistent with the scheme vision of a landscape-led highways improvement scheme.</p> <p>b) The ExA has not specified where the statement it refers to appears, but if the ExA is referring to paragraph 11.5.1 of the Scheme Assessment Report (Document Reference 7.4, APP-420), that provides:</p> <p><i>Option 12 was developed to be a landscape-led design in the previous studies undertaken between 2003 and 2006 for the Highways Agency. Following a landscape study during PCF Stage 1 and the comments gathered during the public consultation, several amendments were made to Option 30 to bring it to the same maturity of design as Option 12.</i></p> <p>That paragraph is referring to the genesis of option 12 as the “modified brown route” from previous optioneering work undertaken by the Highways Agency in the early 2000s. That route is explained at paragraphs 1.4.3 to 1.4.7 of the report.</p> <p>The reference to PCF stage 1 is to the option identification stage which occurred later, leading up to the Preferred Route Announcement (PCF Stage 2) in March 2019. The SAR does not state that option 12 was developed at PCF Stage 1 as a</p>

Number	Directed to	Question	Applicant's Response
		<p>g) Can the Applicant confirm if the costs identified with option 30 as appraised remain valid and whether costs have risen through evolving design, if so how does this affect the weight given to the monetised benefits?</p>	<p>landscape-led route. Its reference to PCF Stage 1 at paragraph 11.5.1 is to the additional engineering design required for option 30, as compared to its more developed competitor option 12 (given its genesis as the modified brown route previously considered by the Highways Agency).</p> <p>The manner in which the development of option 30 as a landscape-led design is addressed extensively in the remainder of the SAR and TAR.</p> <p>c) The statement highlighted by the ExA is thought to be paragraph 5.4.2 of the SAR (Document Reference 7.4, APP-420), which ought to be read with figure 5.3 which follows that paragraph. These relate to the public consultation exercise carried out by Highways England in February and March 2018 on the two route options; 12 and 30.</p> <p>Figure 5.3 shows that 46% of respondents strongly agreed with option 30 based on their questionnaire responses. A further 26% agreed (rather than strongly agreed) with that position; giving the 72% of respondents identified in paragraph 5.4.2. The 8% reflects that percentage of respondents who responded to the question by indicated a preference for option 12 instead.</p> <p>d) The passage referred to by the ExA appears at paragraph 9.5.1, and within the list of environmental impacts there is reference to landscape. Landscape impacts also appear in table 9.6 which is referred to within that paragraph. There is therefore reference to landscape impacts in within that passage.</p> <p>e) Table 0.2 of the SAR (Document Reference 7.4, APP-420 records similar significance of residual environmental effects on landscape for options 12 and 30. The manner in which those assessments were reached is explained at section 9 of the report. The findings of the environmental assessment carried out in respect of landscape and visual effects of the two options appears from paragraph 9.2.18.</p> <p>f) The outcome of the appraisals of options 12 and 30 are reported in the SAR at section 10. Conclusions and recommendations appear at section 11. Both options were landscape-led design options, which emerged from the 30 route options initially identified and sifted. The SAR indicates that there was little to distinguish the two final options on their landscape impacts. As identified above, of the two options, it was option 30 which presented greater opportunities in respect of the landscape. Section 11.8 lists the key factors in the eventual decision as public support, a safer and higher quality road, a lower cost and better value for money, and opportunities</p>

Number	Directed to	Question	Applicant's Response
			<p>for landscape and design development. The ExA can accordingly be satisfied that the decision to proceed with option 30 (rather than option 12) was not one in which the prevailing or overriding factor in decision making was one of cost.</p> <p>g) The Applicant can confirm that the most likely cost estimate published in the SAR remains a valid early appraisal of likely scheme cost.</p> <p>The publication of the SAR came at the end of the project's Option Identification and Selection phase. At that point, the most likely cost was estimated to be £438m, with an adjusted BCR of 1.6. Since publication of the SAR, and notification of the Preferred Route, the scheme's design, cost estimate and benefits have continued to be developed as part of the iterative development process.</p> <p>At the point of submission of the DCO Application, the project estimates a most likely cost of £439.6m (see Paragraph 2.1.1 of the Funding Statement (Document Reference 4.2, APP-025)) and an adjusted BCR of 2.5 (see Table 13-1 of the Combined Modelling and Appraisal Report (Document Reference 7.6, APP-422)). Paragraph 2.1.1 of the Funding Statement confirms that allowances for risk and inflation have been included within the cost estimate for the scheme.</p>
1.1.8	Applicant, CCB	<p>Options Appraisal</p> <p>a) In its Relevant Representation (RR) [RR-021] CCB at Key question 3 refer to two detailed reports on suggested alternatives. Could the Applicant/CCB please confirm the title and references of these reports and whether they have been submitted into the Examination?</p> <p>b) If they have not could the Applicant please submit these or explain why it is not necessary or appropriate to do so?</p>	<p>a) The two documents referred to are:</p> <ol style="list-style-type: none"> 1. A417 CCB Options Report (Document Reference 8.5) to CCB for Information, sent by email to CCB on 9 August 2021; and 2. A417 Cut and Cover Tunnel Feasibility Study (Document Reference 8.6), sent by email to CCB on 25 May 2021. <p>Both are referenced in CCB's Statement of Common Ground and the A417 Cut and Cover Tunnel Feasibility Study is also referenced in the WCH TWG Statement of Common Ground, both appended to the Statement of Commonality (Document reference 7.3, APP-419).</p> <p>b) These documents are submitted at Deadline 1 with the reference numbers identified above.</p>
1.1.9	Applicant	<p>Environmental Statement</p> <p>In paragraph 2.6.105 of Chapter 2 to the Environmental Statement [APP-</p>	<p>As reported in paragraph 2.6.105 of the Environmental Statement (ES) Chapter 2 The Project (Document Reference 6.2, APP-033) no off-site works are proposed as part of the scheme.</p>

Number	Directed to	Question	Applicant's Response
		<p>033] it states: "No off-site works are identified. Details of any off-site works required to facilitate the development (delivered by Highways England or other parties) would be considered at detailed design where applicable." How are the potential effects of off-site works accounted for in the Environmental Statement and what are they?</p>	<p>The draft Development Consent Order (Document Reference 3.1 (Rev 1), APP-022) does include powers that could allow physical works to be undertaken outside of the Order limits but only in very limited circumstances. Flexibility in Article 22 (protective works to buildings) and Article 23 (authority to survey and investigate the land) is required to ensure that the undertaker can undertake protective works to buildings and site investigations on land affected by the authorised development, subject to the controls within those articles. Such works would be very unlikely to have materially new or different environmental impacts to those assessed within the environmental statement (ES). This is because the purpose of such works would be to avoid and mitigate the effects of the scheme, as assessed. In the event that a need for off-site investigations or protective works is identified at the detailed design stage, such works would be designed and managed such that there are no materially new or different impacts to those assessed within the ES. Were the ExA minded to require that the details of any off-site works must be approved prior to such works commencing, it could be readily introduced into a further iteration of the Appendix 2.1 to the ES Environmental Management Plan (EMP) (Document reference 6.4, APP-317).</p>
1.1.10	Applicant	<p>Environmental Statement a) ES Chapter 4 [APP-035] paragraph 4.2.11 scoped out Electric and Magnetic Fields (EMF). If existing services are to be retained beneath the repurposed A417, would walkers or users of any resulting pathway potentially be exposed to EMF? b) Would any diversions or re-routing of existing services (or laying of new connections), such as electric cables, bring them closer to existing dwellings, potentially giving rise to EMF effects?</p>	<p>a) Existing electrical services would be retained below the repurposed A417. The existing services are typical of highway infrastructure in public places. The Electricity Safety, Quality and Continuity Regulations 2002 protect the public by setting out the minimum height, position, insulation and protection specifications of all electrical services. This ensures no health impacts are associated with EMF from electrical services.</p> <p>Walkers, cyclists and horse riders using the repurposed A417 would not be exposed to EMF. The National Policy Statement For Electricity Networks Infrastructure (EN-5) summarises current government advice on exposure to EMF and concludes that, <i>'The balance of scientific evidence over several decades of research has not proven a causal link between EMFs and cancer or any other disease.'</i></p> <p>b) The scheme requires the diversion of existing services, including electric cables, but does not bring them closer to existing dwellings.</p> <p>The exception to this is Grove Farm where the existing overhead cable will be dismantled and replaced with a new underground cable closer to the dwelling. This will not give rise to EMF effects, as the installation will be in line with the Electricity</p>

Number	Directed to	Question	Applicant's Response
			<p>Safety, Quality and Continuity Regulations 2002, and there is no causal link between EMFs and impacts to human health.</p>
1.1.12	Applicant	<p>Clarification on Terminology There are numerous instances where the phrase “at grade” is utilised. For clarity, what does this term mean and is it the same in all instances where it appears (for example paragraph 6.2.81 of the Case for the Scheme)?</p>	<p>In all instances, “at grade” means on the same level and is used to refer to elements of the scheme, including roads, crossings or footpaths, that are at the same level as each other. For clarity, the term “at grade” will be included in Environmental Statement (ES) Chapter 18 Glossary (Document Reference 6.2, APP-049) by way of an updated version of the Environmental Statement - Updates and Errata (Document Reference 6.7, AS-051) which will be submitted at Deadline 2 of the Examination.</p>
1.1.13	Applicant	<p>Lighting a) With regards the commitments in Table 7-4 within the Case for the Scheme [APP-417], confirm what is meant by ‘permanent’ with respect to lighting. b) Would temporary operational lights be affixed to bridges (for example under or on the edge of the Gloucestershire Way crossing) or would any form of lighting column to light the highway be erected on any part of the route? c) Would, via the Order, the Applicant have the ability post-consent to erect lighting of any kind?</p>	<p>a) ‘Permanent’ refers to lighting that would be installed for use in the operational phase, as opposed to the construction phase.</p> <p>b) The positioning of temporary lighting during construction would be confirmed prior to the commencement of the construction phase. L19, BD30 and BD48 of the Register of Environmental Actions and Commitments (REAC) in Environmental Statement Appendix 2.1 Environmental Management Plan (EMP) (Document Reference 6.4, APP-317) describe the commitments made by the Applicant to minimise light pollution during the construction phase.</p> <p>c) The scheme has been designed to be un-lit., and accordingly there is no provision for lighting within the work numbers forming the authorised development described in Schedule 1 of the draft Development Consent Order (dDCO) (Document Reference 3.1 (Rev 1), APP-022) or the latest version of the General Arrangement Plans (Document Reference 2.6a (Rev 1), AS-040).</p> <p>Schedule 1 of the draft Development Consent Order (dDCO) includes a description of the authorised development, including associated development within the Order limits. That includes the powers which enable other development to be carried out in connection with the numbered works. Those powers are listed on page 41 of the dDCO and itemised from (a) to (I), following Work No.36. Paragraph (d) expressly refers to “highway lighting”. There is a residual power for National Highways to bring forward highway lighting, subject to compliance with the remainder of the protections included within the dDCO.</p> <p>However, requirement 11 (detailed design) of Schedule 2 to the dDCO requires any amendments to the preliminary scheme design shown on the works plans and the</p>

Number	Directed to	Question	Applicant's Response
			<p>general arrangement plans to be consulted on with the relevant planning authority and local highway authority. It also requires the Secretary of State, when approving such amendments, to be satisfied that they do not give rise to any materially new or materially worse adverse environmental effects in comparison with those reported in the Environmental Statement.</p>
1.1.14	Applicant	<p>COP26 Following the recent declaration of a climate emergency and the recently held COP26, does the Applicant have any comments on implications for, or any amendments needed to, the application or Environmental Statement?</p>	<p>An assessment of the effects of the scheme in relation to climate is provided in Environmental Statement (ES) Chapter 14 Climate (Document Reference 6.2, APP-045). The ES was updated to reflect recent legislative and policy changes in this area. Please refer to submission of Environmental Statement - Updates and Errata (Document Reference 6.7, AS-051), which includes the following:</p> <ul style="list-style-type: none"> • Updated climate assessment reflecting the sixth carbon budget, legislated for in June 2021 by the Carbon Budget Order 2021. • Reference to Decarbonising transport: a better, greener Britain, published on 14th July 2021 by the Department for Transport (DfT), a plan to decarbonise the entire transport system in the UK. • Reference to Net zero highways: Our 2030 / 2040 / 2050 plan published on 20th July 2021b by National Highways. This responds to the government's Decarbonising transport: a better, greener Britain. <p>No further amendments to the Application or the ES are required in relation to the scheme's effects on climate, or as a result of COP26.</p>
1.1.15	Applicant	<p>Climate Change In addition to those risks detailed in paragraphs 14.8.7 and 14.8.8 of ES Chapter 14 [APP-045], does the Applicant consider that agricultural land (including BMV land) taken temporarily (for example, for construction compounds) would potentially suffer from deterioration (for example, if stripped and stored topsoil and subsoil is exposed in a heatwave condition)?</p>	<p>No, agricultural land (including BMV land) taken temporarily would not suffer from deterioration as appropriate mitigation is secured through the Environmental Statement (ES) Appendix 2.1 Environmental Management Plan (EMP) (Document Reference 6.4, APP-317) which includes the following commitments:</p> <ul style="list-style-type: none"> • GP5 Management Plans: states that the contractor shall prepare Management Plans for certain environmental topic areas as the detailed design is developed, to include a Soils Management Plan. The plan shall be prepared in consultation with the relevant regulatory organisation, relevant planning authority and the local highway authority and submitted to and approved in writing by the Secretary of State. • GS11 states: "Prepare Soils Management Plan: Soils should be managed in accordance with Department for Environment, Food & Rural Affairs (DEFRA) (2009)

Number	Directed to	Question	Applicant's Response
			<p>Construction Code of Practice for the Sustainable Use of Soils on Construction Sites.”</p> <p>An outline of the Soils Management Plan contents is provided in Section 4.3.8 of the Environmental Statement Appendix 2.1 Environmental Management Plan (EMP) (Document Reference 6.4, APP-317). This provides 14 bulleted points on the measures that the plan would, at minimum, include regarding the handling, storage, and reinstatement of soils during construction to avoid any deterioration of topsoil excavated from areas of known high quality agricultural land.</p>
1.1.16	Applicant	<p>Climate Change In terms of traffic generation, congestion, speeds and journey time, would the Proposed Development represent betterment over the current baseline in terms of predicted tCO₂e from vehicular traffic?</p>	<p>No, the scheme does not represent betterment over the current baseline in terms of predicted tCO₂e from vehicular traffic. The reason for this is that the improvement in congestion, speeds and journey time demonstrated by the traffic modelling is outweighed by the increase in vehicle traffic arising from there being more attractive route along the A417 when compared to the existing travel conditions. This is reported in Environmental statement (ES) Chapter 14 Climate (Document Reference 6.2, APP-045) in Table 14-17 'Do-Something' and 'Do-Minimum' operation ('use stage') emissions comparison for modelled opening year (2026), design year (2041) and total over the assumed 60-year operational period (2026 – 2085).</p> <p>The cumulative operational stage emissions over the 60-year operation for the 'Do-Minimum' and 'Do Something' scenarios are compared, and as per paragraph 14.10.10, "The scheme is estimated to lead to an increase of approximately 0.9 million tCO₂e during the modelled 60year operational period (2026 – 2085), relative to the 'Do-Minimum' scenario."</p>
1.1.17	Applicant	<p>Clarification on Data In Chapter 14 of the ES [APP-045] Table 14-15 suggests total construction emissions of 74,114 tCO₂e but paragraph 14.10.4 states this is 74,144. Confirm the correct figure.</p>	<p>The correct total construction emissions is 74,144 tCO₂e.</p> <p>A correction to Table 14-15 and Table 14-18 of Environmental Statement (ES) Chapter 14 Climate (Document Reference 6.2, APP-045) will be provided by way of an updated version of the Environmental Statement - Updates and Errata (Document Reference 6.7, AS-051), which will be submitted at Deadline 2 of the Examination.</p>
1.1.18	Applicant	<p>Approach to Mitigation The Applicant's approach relies heavily on those identified issues and a series of statement commitments to mitigation contained</p>	<p>The Applicant would respectfully suggest that there is a significant volume of information included within the Environmental Statement (ES) Appendix 2.1 Environmental Management Plan (EMP) (Document Reference 6.4, APP-317) and accompanying annexes.</p>

Number	Directed to	Question	Applicant's Response
		<p>in the Register of Environmental Assessment Commitments (REAC) set out in section 3 of the Environmental Management Plan (EMP) [APP-317], however much of these mitigation approaches are set in appendices to detail such mitigation.</p> <p>However, the EMP also relies on Construction Management Plans (at section 4.3) and Construction Environmental method statements (4.4) that it will prepare for certain environmental topics which shall be inserted into the EMP [APP-317]. The EMP [APP-317] is presently considered light in detail and heavily reliant on matters being resolved at the detailed stages including mitigation-specific management plans after consent would have been granted.</p> <p>The ExA is concerned that the approach fails to provide adequate details of how the Applicant intends to mitigate the impacts of the Proposed Development, and the ExA cannot be certain at this stage that mitigation measures or practices would be adequate. The Applicant is required to take note of the ExA's initial view and either provide a statement/ response here justifying the approach and explaining how the ExA's concern can be addressed, and/ or submit the additional documents required.</p>	<p>Design Manual for Roads and Bridges (DMRB) LA120 Environmental Management Plans provide a consistent approach for all National Highways projects, and this standard was adopted when preparing the EMP (Document Reference 6.4, APP-317).</p> <p>The EMP has been produced with an appropriate level of detail for the preliminary design stage. As per DMRB LA120 Environmental Management Plans, the EMP shall provide sufficient and proportionate level of detail on the measures to mitigate and manage the environmental effects. In line with DMRB LA120, "Table A.1 EMP content and structure - First iteration (design stage)", National Highways has produced the following specific management plans in outline format at this stage:</p> <ul style="list-style-type: none"> • Annex A Environmental Constraints Plan • Annex B Construction Traffic Management Plan • Annex C Detailed Archaeological Mitigation Strategy and Overarching Written Schemes of Investigation • Annex D Landscape and Ecological Management Plan • Annex E Materials Management Plan • Annex F Public Rights of Way Management Plan • Annex G Ground and Surface Water Management Plan • Annex H Site Waste Management Plan <p>These were developed on the basis that they would address known stakeholder concerns on the scheme to reassure consultees and the Examining Authority.</p> <p>The EMP would be developed into a more detailed EMP (construction stage) by the contractor once the scheme's detailed design has been finalised, subject to the DCO being granted. This is in line with DMRB LA120 "Table A.2 EMP content and structure - Second iteration (construction stage)" which states it is standard practice that relevant management plans and environmental method statements would be produced or refined, as applicable, in response to the statutory process stage and changes in actions.</p> <p>Commitment GP5 Management Plans requires the contractor to prepare in consultation with the relevant regulatory organisation, relevant planning authority and the local highway authority, the following management plans as a minimum (in addition to updated versions of those management plans listed above):</p>

Number	Directed to	Question	Applicant's Response
			<ul style="list-style-type: none"> • Emergency Preparedness and Response Plan. • Pollution Prevention and Control. • Air Quality Management Plan (including dust) • Noise and Vibration Management Plan. • Soils Management Plan. • Woodland Management Plan. <p>These would be submitted to and approved in writing by the Secretary of State. A brief outline of the minimum requirements that need to be included in these additional management plans is in Section 4.3 EMP (construction) Management Plans of ES Appendix 2.1 EMP (Document Reference 6.4, APP-317).</p> <p>The contractor, once appointed, will develop the EMP (construction stage) <i>“substantially in accordance with the environmental management plan (design stage) certified under article 46 (certification of plans etc.)”</i>. This is secured by Requirement 3 of the draft Development Consent Order (dDCO) (Document Reference 3.1, APP-022).</p> <p>It should also be noted that Requirement 3 of the dDCO specifies that <i>“No part of the authorised development is to commence until an EMP (construction stage) for that part has been prepared, in consultation with the relevant planning authority and the local highway authority, and submitted to and approved in writing by the Secretary of State.”</i></p>
1.1.20	Applicant	<p>Environmental Management Plan (EMP) [APP-317] If the intention is that the EMP is revised every six months:</p> <p>a) How much confidence can the ExA or Interested Parties have that all the necessary mitigations will be retained and enforced throughout the relevant stage/ lifetime of the EMP?</p> <p>b) Who would determine (or be consulted in the determination of) whether the revisions would give rise to new or worse environmental effects?</p>	<p>a) Requirements 3(3) and 3(5) ensure that the authorised development must be constructed, operated and maintained in accordance with the approved EMP (construction stage) and EMP (end of construction stage), as applicable. The EMP and its annexes are described as ‘living documents’ because they are required to be updated and refined as necessary, and at least every six months during construction (see paragraph 1.3.2 (design stage) of the Environmental Statement (ES) Appendix 2.1 Environmental Management Plan (EMP) (Document Reference 6.4, APP-317)). Refinements to the mitigation measures secured may be required to take account of new or updated survey data, changes in legislation, policy and guidance, or responses from stakeholder consultation, for example. Updates would be required in order to record activities undertaken under the EMP, so as to maintain an audit trail of compliance with environmental obligations, in accordance with section 6 (details of maintenance and EMP monitoring activities) of the EMP. This revision process is considered necessary and appropriate, in the context of the duration of the scheme and the mitigation measures secured in the EMP. However, Requirement 3(2)(c) ensures that each iteration of the EMP must include all of the necessary mitigation</p>

Number	Directed to	Question	Applicant's Response
		<p>c) If a new or worse environmental effect was determined to occur as a result of changes to the EMP, what would be the process following such determination?</p>	<p>measures referred to in the Environmental Statement. This ensures that all necessary mitigations will be retained and monitored throughout the lifetime of the EMP.</p> <p>b) Revisions to the EMP would not give rise to materially new or worse environmental effects, as confirmed within paragraph 1.3.2 of the EMP (design stage). This is because revisions to the EMP would only be required in response to additional information revealed or received post-consent in order to capture necessary alterations to the proposed mitigation, or in response to changes to the scheme design. Requirement 11 ensures that where any changes to the preliminary scheme design are proposed, these must be approved by the Secretary of State following consultation with the relevant planning authority and local highway authority and the Secretary of State must be satisfied that any amendments to the works plans and the general arrangement plans showing departures from the preliminary design would not give rise to any materially new or materially worse adverse environmental effects in comparison with those reported in the Environmental Statement. Any revisions to the EMP that are required as a result of changes to the scheme design would not therefore give rise to new or worse environmental effects, as determined by the Secretary of State.</p> <p>c) For the reasons above, no materially new or materially worse adverse environmental effects would occur as a result of changes to the EMP.</p>
1.1.22	Applicant	<p>Mitigation and Monitoring In measure AQ12 of the EMP [APP-317], would water spray/ dampening equipment, installed around the boundary of construction works closest to the sensitive and designated sites, be an effective means of suppressing dust?</p>	<p>Water spray/dampening equipment is recommended by the Institute of Air Quality Management as a means of suppressing dust. However, final details of measures to manage and limit dust pollution at sensitive locations during construction will be confirmed in the Air Quality Management Plan to be prepared in consultation with the relevant planning authority and the local highway authority and submitted to and approved in writing by the Secretary of State under Requirement 3 of the draft Development Consent Order (Document Reference 3.1 (Rev 1), APP-022).</p>
1.1.23	Applicant	<p>Shab Hill Farm a) In measure CH7 of the EMP [APP-317], can a timescale be put on when the wall will be installed?</p>	<p>a) The 1.2m stone wall along the B4070 acts as mitigation for Shab Hill Farm for the operation of the scheme, as opposed to construction mitigation. Hence, the building of the wall would not be on the critical construction programme path but will be installed prior to the operation of the scheme.</p>

Number	Directed to	Question	Applicant's Response
		<p>b) In this, and other similar cases in the EMP, can trigger points be written in to ensure a timely delivery of the mitigation?</p>	<p>b) It is not currently possible to put a timescale on all mitigation elements of the preliminary design to ensure timely delivery. As per paragraph 2.9.20 of Environmental Statement Chapter 2 The Project (Document Reference 6.2, APP-033), <i>“The construction programme would be finalised by the contractor in advance of the works. The duration of the construction works is currently estimated to be at least 33 months, commencing nine months after the start of environmental preparatory works, giving an overall construction period of 42 months.”</i></p> <p>Annex B Construction Traffic Management Plan of ES Appendix 2.1 EMP (Document Reference 6.4, APP-319) identifies the critical path for construction of the project, including 9 – 12 months of advanced environmental mitigation.</p> <p>Upon the appointment of the contractor the detailed construction programme will be determined.</p>
1.1.24	Applicant	<p>EMP Measure BD24 [APP-317] Confirm what is meant by ‘high prevailing winds’ and how will it be determined if the wind becomes ‘high’?</p>	<p>Commitment BD24 of Environmental Statement (ES) Appendix 2.1 Environmental Management Plan (EMP) (Document Reference 6.4, APP-317) states <i>“Water sprinkler systems to be used whenever there is a risk of dust emissions, screening bunds or barriers installed, no material crushing would be undertaken in high prevailing winds in the direction of the ancient woodland (Ullen Wood) or calcareous grassland at Barrow Wake and crushed materials would be removed from site as soon as possible.”</i></p> <p>Prevailing winds, also known as dominant winds, are winds that blow consistently in a given direction in an area. Anemometers would be used to record wind speed, direction and determine if the wind is ‘high’, as well as on-site visual inspections of site conditions. Whilst we haven’t specified the speed at which a wind would be deemed to be high, this measure seeks to ensure sensitive habitats are protected from impact of high winds.</p> <p>Commitment BD24 (ES) Appendix 2.1 EMP (Document Reference 6.4, APP-317) states in the “monitoring requirements” that an ecologist would monitor habitat adjacent to the material crushing compound at intervals throughout construction to ensure efficacy of dust management measures. Table 2-1 (Main roles and responsibilities during construction) within the EMP provides that an Ecological Clerk of Works (ECoW) will be appointed by the contractor to monitor works during construction at sensitive sites, and ensure that all ecological elements of the EMP are complied with.</p>
1.1.25	Applicant, GCC	<p>Legal Agreement</p>	<p>Measure PH3 in Environmental Statement Appendix 2.1 Environmental Management Plan (Document Reference 6.4, APP-317) is to: “Discuss and agree as appropriate the</p>

Number	Directed to	Question	Applicant's Response
		With regards to measure PH3 in the EMP [APP-317], what progress has been made on any legal agreement between the parties and will a completed obligation be presented to the ExA before the close of the Examination?	<p>need for/provision of additional signage with Gloucestershire County Council (GCC) along the scheme and its junctions to key business receptors.”</p> <p>The provision of additional signage along the scheme and its junctions to key business receptors is a matter for detailed design. It is currently not anticipated that a legal agreement between National Highways and GCC will be needed, subject to the ongoing discussions about signage to key business receptors. Typically, individual businesses would identify a potential need for signage and the mechanism through which this gets delivered can be discussed further at that detailed design stage, however it would normally be a cost to the business who requires the signage.</p>
1.1.26	Applicant	<p>Embedded Mitigation</p> <p>a) Paragraph 1.5.1 of the EMP describes the REAC [APP-317] as “including commitments to certain key items of embedded mitigation...”. Can the Applicant confirm whether all of the proposed embedded mitigation measures are included in the REAC?</p> <p>b) If not, please can the Applicant provide a table that identifies all the mitigation relied upon in the ES and the mechanism by which that mitigation is secured, as recommended in Planning Inspectorate Advice Note Seven?</p>	<p>a) The embedded mitigation measures identified in section 2.8 Embedded environmental mitigation of Environmental Statement (ES) Chapter 2 The Project (Document Reference 6.2, APP-033) are included in the Register of Environmental Actions and Commitments (REAC) at ES Appendix 2.1 EMP (Document Reference 6.4, APP-317). Where appropriate, these are illustrated on ES Figure 7.11 Environmental Masterplan Legend (Document Reference 6.3, APP-166 to APP-192).</p> <p>b) The REAC identifies all the mitigation relied upon in the ES and the mechanism by which that mitigation is secured, as recommended in Planning Inspectorate Advice Note Seven.</p>
1.1.27	Applicant	<p>Construction Programme</p> <p>Does the Applicant see any impediments that would extend or otherwise exacerbate the 33-month construction period (42-month overall programme including environmental preparatory works)?</p>	<p>As per paragraph 2.9.20 of Environmental Statement (ES) Chapter 2 The Project (Document Reference 6.2, APP-033), “The duration of the construction works is currently estimated to be at least 33 months, commencing nine months after the start of environmental preparatory works, giving an overall construction period of 42 months.”</p> <p>National Highways does not anticipate or predict any impediment which would extend or exacerbate the period of project construction. There is always the potential for unforeseen circumstances, such as extreme weather events, to have an effect on</p>

Number	Directed to	Question	Applicant's Response
1.1.28	Applicant	<p>Repurposing of A417 Limited information or certainty is provided on the processes of turning the existing A417 into the proposed green byway. Set out, step-by-step the actions required to convert the existing A417 to a green corridor and amenity area. How are these secured in the dDCO?</p>	<p>project construction, but it is not possible to predict these or the effect that they may have.</p> <p>The Applicant would respectfully suggest that there is a significant volume of information within the Application documents in this regard.</p> <p>The reprovision of the existing A417 would be controlled through the Requirements of the draft DCO (Document Reference 3.1, APP-022). In particular, Requirement 3 which requires the provision of a Landscape and Ecological Management Plan (LEMP) as part of the Environmental Management Plan (EMP) (construction stage), and Requirement 5 which requires a landscaping scheme to be submitted and approved, based on Environmental Statement (ES) Figure 7.11 the Environmental Masterplan (Document Reference 6.3, APP-166 to APP-192). Requirement 6 requires all landscaping works to be carried out in accordance with the approved landscaping scheme.</p> <p>Annex D LEMP of ES Appendix 2.1 EMP (Document Reference 6.4, APP-321) sets out how the landscape design and ecology mitigation measures would be delivered and managed for the scheme (see paragraph 1.1.1 of APP-321). Section 5.3 of the LEMP includes specific details of how elements of the existing habitat would be protected during construction, and additional habitat created in conjunction with the amenity public rights of way which together form the Applicant's proposed repurposing of the A417.</p> <p>The landscape design proposals are shown on ES Figure 7.11 Environmental Masterplan (Document Reference 6.3, APP-166 to APP-192). These show spatially what it is that is proposed to be provided as part of the scheme's mitigation proposals. The relevant sheets for the repurposed A417 are 19, 20, 21, 22, 23, 24 and 25. By way of example, sheet 24 (APP-191) identifies that a significant proportion of the existing A417 within that sheet is to be provided as calcareous grassland. The additional codes appearing on those sheets are identified in the Environmental Masterplan Legend (APP-167), and cross refer to the detailed methodological statements included within the LEMP for their respective functions (see table 2-1 onwards of the LEMP).</p> <p>Notwithstanding the above, the step-by-step actions required to repurpose the existing A417 will be a matter for detailed design. Detailed design is a matter for discussion with construction contractors and relevant stakeholders and is controlled at DCO Requirement 3 and 11.</p>

Number	Directed to	Question	Applicant's Response
1.1.29	Applicant, CDC, CCB	<p>Cotswold National Park A few relevant representations have raised the prospect of the creation of the Cotswold National Park. Provide any information on any intentions or workings undertaken on any such creation to date and what, if any, the implications of the Proposed Development would have on achieving any National Park status.</p>	<p>The Environmental Statement (ES) (Document Reference 6.2, APP-031 to APP-049) assesses the impact of the scheme on the Cotswolds Area of Outstanding Natural Beauty (AONB). Should the AONB become a National Park, this would make no material difference to the Environmental Impact Assessment undertaken and reported in the ES.</p>
1.1.30	Applicant, Western Gateway Sub-National Transport Body	<p>Strategic Transport Plan Explain the relevance and importance of the Strategic Transport Plan with regards to the Proposed Development, referencing the NPSNN and PA2008 where appropriate.</p>	<p>The Western Gateway Strategic Transport Plan (2020 – 2025) outlines the role and functions of the Sub-National Western Gateway Transport Body and identifies the delivery outcomes and priorities of the transport body for the plan period. The purpose of the Strategic Transport Plan is “to provide clarity on Sub-national transport priorities for investment discussions enabling more effective and meaningful engagement” (page 21). The Strategic Transport Plan confirms that during the plan period it will support the delivery of sub-national priorities, including the A417 Missing Link (page 48).</p> <p>Whilst the support of the Strategic Transport Plan is a relevant consideration, the policy framework for examining and determining DCO applications in England and Wales under the Planning Act 2008 is provided by the relevant National Policy Statement, which in this case is the National Policy Statement for National Networks.</p>
1.1.31	Applicant	<p>Drawings No structural engineering drawings have been provided for the various crossings, overbridges and overpasses, only engineering section drawings. Provide details of each of the crossings in plan, section and elevation drawing form.</p>	<p>National Highways does not propose to submit detailed structural information on crossings, overbridges and overpasses as part of the Examination on the basis that these structures will be developed during detailed design in consultation with key stakeholders.</p> <p>National Highways considers that the information provided on the General Arrangement Plans (Document Reference 2.6a (Rev 1), AS-040) and Engineering Section Drawings A417 Mainline (Document Reference 2.6b, APP-011) is adequate to address the requirements of The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (the APFP Regulations) 6(2) and 5(2)(o).</p> <p>The Design Summary Report (Document Reference 7.7, APP-423) describes the principles of the structural design and sets out the approach that the contractor must take at the detailed design and construction phase to ensure the principles of high architectural quality and landscape led solution are implemented.</p>

Number	Directed to	Question	Applicant's Response
			<p>Commitment L21 of ES Appendix 2.1 Environmental Management Plan (Document Reference 6.4, APP-317) secures the high architectural quality required at detailed design "Bridges and structures to be of high architectural quality, finished in locally sourced material and other materials suitable to the local vernacular".</p>
1.1.32	Applicant	<p>Submission of Documents Can the Applicant please submit 'Clean' and 'Tracked Changes' versions of all/ any amended documents at each time one is submitted to facilitate easy identification of where changes have been made (including, but not limited to, the Application Document Tracker, DCO and EM)?</p>	<p>Where it is practicable to do so, National Highways has submitted both 'tracked changes' and 'clean' versions of amended documents at Deadline 1. However, some documents – including draft Statements of Common Ground – were already undergoing amendment prior to this request being made by the Examining Authority on 16 November 2021. As such, it is not possible for some of the documents to be submitted in a tracked change version for Deadline 1.</p> <p>National Highways will endeavour to submit both tracked changes and clean versions of all amended documents wherever possible at Deadline 2 and at subsequent deadlines.</p>
1.1.33	Applicant	<p>Environment Act 2021 The Environment Bill was given Royal Assent on 9 November 2021 and became law. Can the Applicant please comment on the effect the provisions in the Environment Act 2021 will have on the consideration of the Proposed Development?</p>	<p>The Environment Act 2021 (EA 2021) contains provisions that have the potential to affect consideration of the application for the scheme. The Applicant would draw the ExA's attention to the following provisions, none of which are currently in force.</p> <p>Section 2 (Environmental targets: particulate matter) of the EA 2021 provides that the Secretary of State (SoS) must by regulations set a target in respect of the annual mean level of PM2.5 in ambient air. A date for commencement of this section is yet to be appointed by the SoS. Once in force, and subject to the target set, the introduction of a statutory target could affect the consideration of the scheme. However, there is no indication that a new statutory target will be in place prior to determination of this application.</p> <p>Part 3 (Waste and resource efficiency) of the EA 2021 includes provisions in relation to producer responsibility obligations and the management of waste. In particular, sections 50 and 51 confer power on the relevant national authority to make regulations about producer responsibility obligations, and the payment of sums in respect of the costs of disposing materials. Section 60 amends the Environmental Protection Act 1990 to allow the relevant national authority to, by regulations, make provision for, about or connected with the regulation of hazardous waste in England. Dates for commencement of these sections are yet to be appointed by the SoS. Once in force,</p>

Number	Directed to	Question	Applicant's Response
			<p>and subject to the details of the regulations issued, any new regulations on the management of waste and producer responsibility obligations could affect the consideration of the scheme. However, there is no indication that new regulations will be in place prior to determination of this application.</p> <p>Part 6 (Nature and biodiversity) of the EA 2021 includes a new biodiversity gain requirement for nationally significant infrastructure projects (NSIPs) under section 99 and Schedule 15. Other relevant provisions within Part 6 include revisions to the strengthen the general duty to conserve and enhance biodiversity under section 40 of the Natural Environment and Rural Communities Act 2006, and a requirement for local nature recovery strategies under section 104. A date for commencement of Part 6 is yet to be appointed by the SoS. Once section 99 and Schedule 15 are in force, the new biodiversity gain requirement for NSIPs would be subject to any transitional arrangements and the publication of biodiversity net gain statements in respect of specific types of development. There is no indication that a biodiversity gain requirement would apply to this scheme prior to its determination.</p>
1.2 Air Quality and Emissions			
1.2.1	Applicant	<p>Assessment Methodology Explain whether the assessment methodology for air quality is based upon the most up-to-date guidance contained within the DMRB, and what bearing it would have on the ES if it were not.</p>	The assessment follows the most up-to-date and publicly available Design Manual for Roads and Bridges standard LA105 Air Quality.
1.2.2	Applicant	<p>WHO Standards In September 2021 the World Health Organisation published new Global Air Quality Guidelines. Could the Applicant please set out their response to these guideline standards, setting out any implications that this may have for the consideration of this Proposed Development?</p>	The World Health Organisation Global Air Quality guidelines are not currently part of UK legislation or policy requirements. The air quality assessment undertaken by National Highways as reported in the Environmental Statement Chapter 5 Air Quality (Document reference 6.2, APP-036) remains in accordance with current legislation in compliance with policy such as the National Policy Statement for National Networks.

Number	Directed to	Question	Applicant's Response
1.2.3	Applicant	<p>Mitigation and Monitoring State whether mitigation measures specific to demolition, earthworks, construction, and track out, such as those stated within the Institute of Air Quality Management: Guidance on the assessment of dust from demolition and construction, will be utilised to minimise and mitigate dust arisings during the construction phase.</p>	<p>Commitment AQ10 of Environmental Statement Appendix 2.1 Environmental Management Plan (EMP) (Document Reference 6.4, APP-317) states that “<i>Specific measures shall be based upon industry good practice, including the measures listed in the Institute of Air Quality Management’s (IAQM) Guidance on the Assessment of Dust from Demolition and Construction.</i>”</p> <p>Implementation of air quality mitigation measures, including commitment AQ10, will be secured within the Air Quality Management Plan to be approved as part of the EMP (construction stage) under Requirement 3 of the draft Development Consent Order (Document 3.1, APP-022).</p>
1.2.5	Applicant	<p>Baseline Conditions Can the monitoring results referred to in paragraph 5.4.6 of ES Chapter 5 [APP-036], in relation the PM10 and PM2.5, be published and made available to the Examination?</p>	<p>Background PM10 concentrations for 2017 the baseline year are shown in table 1-5 of Environmental Statement (ES) Appendix 5.4 Air quality baseline data (Document Reference 6.4, APP-336).</p> <p>No other particulate monitoring (PM10 or PM2.5) was included in the ES as the assessment of PM10 and PM2.5 was scoped out at the scoping stage because the total concentrations in the study area are well below the relevant air quality objectives. However, the relevant particulate monitoring results undertaken by local authorities has been summarised and presented in Appendix B of this document.</p>
1.2.6	Applicant	<p>Assessment Methodology</p> <p>a) In Chapter 5 of the ES [APP-036] with reference to paragraph 5.4.11, does the scoping out of site equipment cover result in the exclusion of diesel generators or similar apparatus that may be needed to support construction works or construction worker compounds?</p> <p>b) Is it appropriate to take these into account to determine the effects, notwithstanding that they are time-limited in duration?</p>	<p>a) Yes, the air quality assessment scoped out emissions from diesel generators or similar apparatus that may be needed to support construction works or worker compounds. However, the use of diesel generators or similar apparatus would be controlled by way of the measures detailed at part (b) of this response.</p> <p>b) It is considered appropriate to scope out emissions from these sources due to the temporary nature of the works and the minimal impact the site equipment would have on overall pollutant concentrations. Paragraph 5.4.11 of the ES Chapter 5 Air quality (Document Reference 6.2, APP-036) confirms that best practice measures are included in ES Appendix 2.1 Environmental Management Plan (EMP) (Document Reference 6.4, APP-317) and as noted within the EMP, commitment AQ9 states: ‘All construction plant would use fuel equivalent to ultra-low sulphur diesel (ULSD) where possible.’ and commitment AQ10 states that ‘Specific measures shall be based upon industry good practice, including the measures listed in the Institute of Air Quality Management’s (IAQM) Guidance on the Assessment of Dust from Demolition and Construction.’ This includes the recommendation to ‘Avoid</p>

Number	Directed to	Question	Applicant's Response
			the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where practicable'. With mitigation in place the effect of any emissions from construction compounds can be managed and impacts are not likely to be significant.
1.2.7	Applicant	<p>Vehicle Emissions Paragraph 5.6.4 of Chapter 5 of the ES [APP-036] provides details regarding the study area used for the assessment of impacts from HGVs during the construction phase, however it is not clear whether this includes the ARN.</p> <p>a) Can the Applicant confirm if the assessment for HGV emissions has considered effects on the Affected Road Network? And if not, why not?</p> <p>b) Have the emissions from LGVs, personnel vehicles and staff vehicles within the study area been taken into account in the air quality assessment? If not, why not?</p>	<p>a) The assessment of impacts from construction traffic includes emissions from roads where construction traffic is expected to be routed. Construction traffic was added to baseline traffic volumes along the scheme extent, the A417 towards M5 and the A417 towards Cirencester. This is the construction phase affected road network. Beyond these locations it is considered that construction traffic flows disperse to well below the 200 Heavy Goods Vehicle (HGV) screening criteria in DMRB LA105 Air Quality and would not be met for other roads beyond this extent. Environmental Statement (ES) Figure 5.1 Construction Traffic Study Area (Document Reference 6.3, APP-073) shows the extent of the roads used in the construction traffic assessment.</p> <p>The assessment year used for the construction traffic assessment was 2015. This would present emissions that are worse than would occur in the first year of construction, therefore representing a pessimistic assessment approach. This is because pollutant emissions from road vehicles are expected to improve between 2015 and the first construction year.</p> <p>b) No Large Goods Vehicles (LGVs), personnel vehicles or staff vehicles were included in the assessment. However it is considered unlikely that the combination of HGVs and LGVs would exceed the 1000 daily vehicle screening threshold in DMRB LA105 Air Quality. Therefore, no changes to the conclusions in the air quality assessment would be expected. Therefore, no changes to the conclusions would be expected because it is unlikely there would be enough additional LGV movements to meet the screening threshold and justify an assessment of LGVs.</p>
1.2.8	Applicant	<p>Vehicle Movements For clarity, when HGVs are referred to (such as in paragraph 5.8.5) does this purely relate to vehicles that bring/ takeaway construction and demolition materials to the site or does this also include road</p>	<p>Heavy Goods Vehicles for the purposes of the construction traffic assessment are road licensed vehicles travelling to and from the construction sites and a number of off road haulage vehicles all used for transporting materials and waste.</p> <p>No other road construction vehicles such as steamrollers and tarmac spreaders or other vehicles considered to be Non-Road Mobile Machinery are considered in the</p>

Number	Directed to	Question	Applicant's Response
		construction vehicles (steamroller, tarmac spreader etc)?	construction traffic assessment. The contribution from such vehicles would not be a significant proportion of total emissions.
1.2.9	Applicant	<p>NO₂ Thresholds Would the Proposed Development lead to any new exceedances of NO₂ inside or outside any AQMA or Air Quality sensitive area, or would effects be constrained to affecting existing exceedances (for better or worse)?</p>	<p>No new exceedances of the annual mean NO₂ objective are predicted at any location during the operational phase of the proposed development. During the construction phase there would be no new exceedances, however there would be the continuation of existing exceedances within the existing Birdlip Air Quality Management Area (AQMA) at the cottages adjacent to the existing Air Balloon Roundabout.</p> <p>The scheme design (moving the road further away from existing cottages) removes the exceedance in the future and the scheme is included in the Cotswold District Council air quality action plan as a measure that would improve air quality at Birdlip AQMA.</p>
1.2.11	Applicant, GCC, TBC, CDC	<p>Mitigation</p> <p>a) Whilst paragraph 5.10.12 of ES Chapter 5 [APP-036] predicts no new exceedances of annual mean NO₂, receptors 50 and 51 would see a 0.5yg/m³ increase on top of the existing exceedance of 43.7yg/m³. What bespoke mitigation measures could be implemented to reduce the worsening of air quality for these residents?</p> <p>b) For what duration is construction predicted in the locality of these receptors?</p>	<p>a) No bespoke mitigation has been recommended at this location due to the temporary nature of the effect, and there is no suitable mitigation that could be applied. Annex B Construction Traffic Management Plan (CTMP) of Environmental Statement (ES) Appendix 2.1 Environmental Management Plan (EMP) (Document Reference 6.4, APP-319) seeks to maintain free flowing traffic at the existing Air Balloon roundabout during construction to reduce the worsening of air quality for these residents.</p> <p>Pessimistic assumptions were included in the model set up to derive the change in NO₂ concentrations at receptors 50 and 51 (the Air Balloon Cottages) such as using 2016 emission factors which are higher than would be expected in the year construction starts. Further assumptions are discussed in section 5.5 of the Environmental Statement Chapter 5 Air Quality and model setup parameters are discussed in Appendix 5.2 Air Quality Operational Assessment Methodology.</p> <p>This is because, based on national projections, pollutant emissions from road vehicles are expected to improve between 2015 and the first construction year. The greatest annual mean NO₂ concentration (43.7µg/m³) at these receptors is already above the air quality objective. Receptors 50 and 51 are the only receptors predicted to be exceeding the annual mean NO₂ air quality objective during the construction phase. The change predicted is 0.1ug/m³ above the threshold which would be considered a negligible change (0.4ug/m³).</p>

Number	Directed to	Question	Applicant's Response
			<p>Based on the CTMP, National Highways believes that traffic would be expected to reduce at the existing Air Balloon roundabout during the construction phase (something which was not accounted for in the air quality assessment).</p> <p>b) Construction work in the locality of receptors 50 and 51 will last approximately 24 months. After that, traffic passing the cottages will be at free flowing conditions and will be significantly reduced. It is likely emissions and therefore concentrations at this location would also reduce after this period.</p>
1.2.12	Applicant	<p>Construction Effects With reference to paragraph 5.10.16 in Chapter 5 of the ES [APP-036], does the small number of links referred to include assessment of all those likely routes that traffic would divert to avoid the construction works and delays during the construction period?</p>	<p>Paragraph 5.10.16 of Environmental Statement Chapter 5 Air quality (Document Reference 6.2, APP-036) is about the identification of the affected road network (ARN) for the operational phase. The reference to the number of road links that were included within the ARN based on changes in speed does not relate to the construction period.</p>
1.2.14	Applicant	<p>Reassigned Traffic What assumptions have been made in the ES when re-assigning traffic during construction works in AQMAs?</p>	<p>There were no assumptions made in the reassignment of traffic during construction works in Air Quality Management Areas (AQMAs). The construction traffic assessment applied construction traffic to the A417 between the M5 and the scheme and Cirencester and the scheme only.</p> <p>There was no construction phase traffic data available at the time of the assessment reported in the Environmental Statement (ES) and only construction related Heavy Goods Vehicle (HGV) volumes were available. Based on Annex B Construction Traffic Management Plan (CTMP) of ES Appendix 2.1 EMP (Document Reference 6.4, APP-319), National Highways believes that during the construction phase there would be a net reduction in traffic volumes travelling through the Birdlip AQMA at the Air Balloon Roundabout as the construction of the scheme would make the route less attractive. This likely net reduction in traffic has not been modelled or analysed in the air quality assessment.</p>
1.3 Biodiversity, Ecology and Natural Environment (including Habitats Regulations Assessment (HRA))			
1.3.1	Applicant, GCC	Biodiversity Metric	<p>a) The ecological design of the scheme focusses on provision of locally distinctive priority habitats to benefit biodiversity, with a particular focus on maximising the net</p>

Number	Directed to	Question	Applicant's Response																								
		<p>The ExA cannot locate a figure or appendix setting out the Applicant's assessment against the Biodiversity Metric 2.0 calculations. In this regard, can the Applicant:</p> <p>a) Present the calculation in full and set out the results (or direct the ExA to where the calculation exists).</p> <p>b) Detail how the results have influenced the approach to biodiversity net gain and mitigation.</p> <p>c) What effect, if any, would the re-purposing of the car park at the Barrow Wake viewpoint have on the Biodiversity Metric 2.0 calculations and, as a result, would that justify compulsory acquisition of the car park or would CA be necessary if retained by GCC and alternative management secured?</p> <p>d) Natural England released Biodiversity Metric 3.0 on 7 July 2021. Explain whether or not a calculation using this new metric should (or should not) be provided for this DCO application and, if so, how the Proposed Development performs against it.</p>	<p>increase in lowland calcareous grassland. There would be a large net gain in the total area of priority habitats as a result of the scheme, comprising priority habitat types appropriate to the Cotwolds AONB, as summarised in Table 8.1 of the Case for the Scheme (Document Reference 7.1, APP-417) as replicated below.</p> <p>Table 8.1 Losses and gains in area of priority habitats</p> <table border="1"> <thead> <tr> <th>Priority Habitat Type</th> <th>Total habitat type within the DCO Boundary Hectares (ha) and metres (m) for hedgerow</th> <th>Total habitat type lost as a result of the scheme Hectares (ha) and metres (m) for hedgerow</th> <th>Total habitat type proposed as part of the scheme Hectares (ha) and metres (m) for hedgerow</th> <th>Net permanent gain as a result of the scheme Hectares (ha) and metres (m) for hedgerow</th> </tr> </thead> <tbody> <tr> <td>Lowland mixed deciduous woodland</td> <td>20.04ha (plus 6.45ha of broadleaved plantation (non-priority habitat))</td> <td>12.42ha (plus 3.56ha of broadleaved plantation loss)</td> <td>25.57ha</td> <td>9.59ha (taking into account losses of lowland mixed deciduous and broadleaved plantation woodland)</td> </tr> <tr> <td>Lowland calcareous grassland</td> <td>4.94ha</td> <td>2.53Ha</td> <td>75.41ha</td> <td>72.88ha</td> </tr> <tr> <td>Hedgerow</td> <td>5,463m</td> <td>3,473m</td> <td>9,024m</td> <td>5,551m</td> </tr> </tbody> </table> <p>The Biodiversity Metric 2.0 calculation indicates the following net changes in biodiversity units:</p> <ul style="list-style-type: none"> • Area-based habitat change of -29.66% (-251.34 units) • Hedgerow units +60.4% (28.19 units) • River units -26.56% (-5.39 units) 					Priority Habitat Type	Total habitat type within the DCO Boundary Hectares (ha) and metres (m) for hedgerow	Total habitat type lost as a result of the scheme Hectares (ha) and metres (m) for hedgerow	Total habitat type proposed as part of the scheme Hectares (ha) and metres (m) for hedgerow	Net permanent gain as a result of the scheme Hectares (ha) and metres (m) for hedgerow	Lowland mixed deciduous woodland	20.04ha (plus 6.45ha of broadleaved plantation (non-priority habitat))	12.42ha (plus 3.56ha of broadleaved plantation loss)	25.57ha	9.59ha (taking into account losses of lowland mixed deciduous and broadleaved plantation woodland)	Lowland calcareous grassland	4.94ha	2.53Ha	75.41ha	72.88ha	Hedgerow	5,463m	3,473m	9,024m	5,551m
Priority Habitat Type	Total habitat type within the DCO Boundary Hectares (ha) and metres (m) for hedgerow	Total habitat type lost as a result of the scheme Hectares (ha) and metres (m) for hedgerow	Total habitat type proposed as part of the scheme Hectares (ha) and metres (m) for hedgerow	Net permanent gain as a result of the scheme Hectares (ha) and metres (m) for hedgerow																							
Lowland mixed deciduous woodland	20.04ha (plus 6.45ha of broadleaved plantation (non-priority habitat))	12.42ha (plus 3.56ha of broadleaved plantation loss)	25.57ha	9.59ha (taking into account losses of lowland mixed deciduous and broadleaved plantation woodland)																							
Lowland calcareous grassland	4.94ha	2.53Ha	75.41ha	72.88ha																							
Hedgerow	5,463m	3,473m	9,024m	5,551m																							

Number	Directed to	Question	Applicant's Response
			<p>The full Biodiversity Metric 2.0 calculation is provided in Biodiversity Net Gain Calculation (Document Reference 8.10)</p> <p>b) The approach to biodiversity in relation to scheme design has been driven by a mitigation hierarchy approach, i.e. a sequential process to avoid, mitigate and compensate impacts and effects upon ecological features. This approach is at the core of ecological good practice for design, within CIEEM Ecological Impact Assessment (EclA) guidelines (Guidelines for Ecological Impact Assessment in the UK and Ireland, Chartered Institute of Ecology and Environmental Management, 2019) and DMRB LA 104 Environmental assessment and monitoring and DMRB LD 118 Biodiversity design.</p> <p>A Biodiversity Net Gain (BNG) approach supports the application of the same mitigation hierarchy that forms the basis of ecological good practice for design. Therefore, the design of ecological mitigation has been influenced by the same core process that underpins BNG, i.e. a sequential process of avoiding, minimising, restoring and compensating damage to ecological features. The deviation between a BNG approach and the approach to the design of the scheme, is that the quantum of compensation requirements within the scheme have not been determined by a BNG metric-based approach. Losses of lower value habitat types that are not significant, such as intensively farmed land, do not justify compensation on the basis of the Environmental Impact Assessment (EIA), which follows best practice within CIEEM Ecological Impact Assessment (EclA) guidelines. Such losses are assigned substantial biodiversity units under a BNG metric-based approach and compensation for these losses would require substantial additional land outside of land that is included within scheme boundary as mitigation and compensation for significant effects.</p> <p>Compensation for such non-significant losses of habitat as part of BNG have not been included within the Scheme because there is no policy or legal basis to justify the compulsory acquisition of land for this purpose. Instead, the design of habitat creation within the scheme is primarily shaped by requirements for appropriate mitigation and compensation to address significant adverse effects identified by the EIA. The compensation design is based upon best practice principles within CIEEM Ecological Impact Assessment (EclA) guidelines, i.e. the design has sought to provide compensation as close as possible to the location where the effects occur, to provide habitat similar in terms of ecological features and functions that have been lost and to provide a replacement ratio of compensatory habitat greater than one-to-one.</p>

Number	Directed to	Question	Applicant's Response
			<p>Furthermore, an aim of the scheme is to maximise opportunities for biodiversity delivery within the land acquired for the scheme design. The key priority for biodiversity enhancement of the Cotswolds AONB for this scheme that has been established through extensive stakeholder consultation, including Natural England, National Trust, Gloucestershire Wildlife Trust (GWT) and Cotswolds Conservation Board, is the restoration and creation of calcareous grassland. This is because this habitat has seen sharp declines from around 40% of the Cotswolds in the 1930s to less than 1.5% today (source: Cotswolds National Landscape website). The landscape design has therefore focussed on maximising the provision of lowland calcareous grassland priority habitat, which aligns with the draft local Nature Recovery Network being produced by the Gloucestershire Local Nature Partnership (led by GWT). As a result, the scheme will deliver 75.41ha of calcareous grassland representing a net gain in area of calcareous grassland priority habitat of 72.88ha.</p> <p>Creation and enhancement of lowland calcareous grassland scores relatively poorly within the BNG calculation because the metric heavily discounts the biodiversity unit score of the habitat on the basis that it is difficult to create and takes a long period to reach target condition. If the design was purely driven by maximising BNG units, then substantially more units per ha could be delivered within the same area, by targeting easier to create habitats that do not align with the strategic focus on lowland calcareous grassland provision. This would be less appropriate for the local area and would not be reflective of the conservation priorities of the key stakeholders.</p> <p>Outside of the DCO Application, National Highways is continuing to investigate further opportunities to achieve a neutral or better metric score through looking at other off-site measures and use of separate Environmental Designated Funds.</p> <p>c) Conversion of 0.37ha of hardstanding at Barrow Wake car park to lowland calcareous grassland would score a maximum of 1.0 biodiversity units (assuming good condition, high strategic significance and high connectivity) using Biodiversity Metric 2.0.</p> <p>This would change the area-based habitat BNG calculation result from -29.66% to -29.54%.</p>

Number	Directed to	Question	Applicant's Response
			<p>It is not considered that a change in the BNG calculation of 0.12% would justify compulsory acquisition of the car park.</p> <p>d) National Highways have a national target at programme level for no net loss of biodiversity across its activities by 2025, progressing towards delivering a net gain in biodiversity by 2040. The Department for Transport (DfT) has mandated that National Highways use the Defra Metric 2.0 in measuring and reporting against its internal objectives. This scheme adheres to this approach for reasons of consistency and comparability between National Highways projects, which allows reporting at this programme level.</p> <p>A BNG calculation was not provided at submission of this DCO application because there is no legal or policy requirement for the scheme to deliver BNG. Nonetheless, BNG calculations using the Defra Metric 2.0 have been produced for this scheme since March 2020 for National Highways internal reporting purposes, and to inform ongoing discussions with stakeholders and to maximise biodiversity opportunities.</p> <p>NE provided the following advice at publication of Defra 3.0 in July 2021 (source: Natural England website):</p> <p><i>“Users of the previous Biodiversity Metric 2.0 should continue to use that metric (unless requested to do otherwise by their client or consenting body) for the duration of the project it is being used for as they may find that the biodiversity unit values metric 2.0 generates will differ from those generated by Biodiversity Metric 3.0”</i></p> <p>It is not proposed to provide a calculation in Defra Metric 3.0 for this DCO application for the following reasons:</p> <ul style="list-style-type: none"> • Defra Metric 3.0 has not been adopted as the standard by DfT for National Highway projects. • Defra Metric 3.0 was published on 07 July 2021, after the DCO application was submitted (on 01 June 2021). • The scheme has been assessed using Defra Metric 2.0 since early 2020 and NE general advice upon publication of Metric 3.0 was that projects that were using Defra Metric 2.0 should continue to do so for the duration of the project. • Defra Metric 3.0 will not be the version used for mandatory calculation of BNG to meet the requirements of the Environment Act. NE have suggested in recent

Number	Directed to	Question	Applicant's Response
			<p>presentations that there is likely to be a further interim Defra Metric 3.1, before publication of Defra Metric 4.0 to be used for the first projects to require mandatory BNG under the Town and Country Planning Act in late 2023. NE's current draft timetable also shows that BNG will not become a legal requirement for NSIPs until the end of 2025.</p>
1.3.2	Applicant	<p>Biodiversity Net Gain</p> <p>a) Which articles, requirements and control documents would ensure the delivery of biodiversity net gain?</p> <p>b) What monitoring measures are in place to ensure that the newly created habitat is established and successful, and over what period is this monitoring required?</p>	<p>a) The scheme's contribution towards biodiversity is outlined in response to ExA Question 1.3.1 above. The delivery of that contribution will be secured through the Development Consent Order (DCO) Requirements, and in particular Requirements 3, 5 and 6 of the draft DCO (Document Reference 3.1, APP-022).</p> <p>The Response to ExA Question 1.1.28 above explains how Requirements 3, 5 and 6 ensure that habitats mitigation will be delivered by the scheme.</p> <p>b) Monitoring of newly created habitat will be secured by commitment BD45, within the Environmental Statement (ES) Appendix 2.1 Environmental Management Plan (EMP) (Document Reference 6.4, APP-317) and detailed in Annex D Landscape and Ecological Management Plan (LEMP) of ES Appendix 2.1 (Document Reference 6.4, APP-321) to ensure the habitats achieve target condition and remediation measures will be included should any corrective action be required. The EMP will be approved pursuant to Requirement 3 of the draft DCO (Document Reference 3.1, APP-022).</p> <p>Upon completion of construction of the scheme the EMP (construction stage) must be converted into the EMP (end of construction stage), which is pursuant of Requirement 3 of the draft DCO (Document Reference 3.1, APP-022). The scheme must be operated and maintained in accordance with the EMP (end of construction) which will contain the long-term commitments to aftercare, monitoring and maintenance activities. This will ensure the continued long-term effectiveness of the environmental mitigation measures and the prevention of unexpected environmental impacts during the operation of the scheme.</p>
1.3.3	Applicant	<p>Biodiversity Net Gain</p> <p>a) How has the Applicant approached and balanced the matters of biodiversity net gain</p>	<p>a) The Applicant's response to ExA Question 1.3.1(b) provides a full response to the approach which has been taken by the Applicant in identifying the land requirements for mitigation or compensation to address significant adverse effects identified by the EIA for the scheme. That approach is reflected in the Statement of Reasons (SoR) (Document Reference 4.1, APP-024) where Appendix A provides the purpose for</p>

Number	Directed to	Question	Applicant's Response
		<p>against land acquisition and rights interference?</p> <p>b) Is the taking of land to reinstate calcareous grassland and to compensate the loss of SSSI habitat demonstrated to comply with the tests of Compulsory Acquisition as per PA2008?</p>	<p>which compulsory acquisition and temporary possession powers are sought. Sections 5.3 and 5.4 of the SOR summarise the need for the land and the compelling case in the public interest for the acquisition of that land. The National Policy Statement for National Networks requirement to deliver high environmental standards is expressly acknowledged within the SOR at paragraph 5.3.6.</p> <p>However, there is no legal or policy justification which would sustain the compulsory acquisition of land to deliver biodiversity net gain. Achieving that specific objective is not therefore something which has been taken into account or balanced in the Applicant's approach to land acquisition and rights interference. Indeed, the response to Question 1.3.1(b) notes that in following the recommendation of key stakeholders to maximise the provision of calcareous grassland, the scheme is consequently failing to obtain the full scores within the biodiversity metric that might otherwise have been available to it.</p> <p>As explained in response to the ExA's Question 1.1.33 above, the relevant provisions of the Environment Act 2021 which pertain to the delivery of biodiversity net gain by nationally significant infrastructure projects have not yet been the subject of commencement regulations. Once commenced, they will only operate to require such projects to deliver biodiversity net gain once the Secretary of State (SoS) has adopted a biodiversity gain statement in respect of the relevant infrastructure type. Neither of those events are understood to be likely to occur prior to the determination of this Application. If they were to occur, it would be expected that transitional provisions would except their application to existing applications, to avoid creating uncertainty in the legal and policy basis for the preparation and determination of nationally significant infrastructure projects.</p> <p>b) All additional land taken for habitat creation within the DCO boundary is taken for the purpose of essential mitigation or compensation and therefore complies with the tests of Compulsory Acquisition as per PA2008.</p>
1.3.4	Applicant, Natural England, Gloucestershire Wildlife Trust	<p>Calcareous Grassland</p> <p>a) Chapter 15 of the ES [APP-046] purports to provide a gain of 72.5 hectares of calcareous grassland habitat. Is this expected delivery robust and is there evidence to</p>	<p>a) A large proportion of the proposed calcareous grassland is on the road verges and embankments. National Highways committed on 2 December 2020 to a new initiative that will see all grassland areas on improvement schemes finished with subsoil or bare substrate such as chalk/limestone and be seeded with wildflowers and grasses appropriate to the substrate type to create open grasslands high in biodiversity. This initiative is in line with the Plantlife Best Practice Guide: Managing</p>

Number	Directed to	Question	Applicant's Response
		<p>suggest the full quantum stated would be successfully delivered?</p> <p>b) With reference to paragraph 2.8.48 of Chapter 2 to the ES [APP-033], is the creation of calcareous grassland possible on a bridge?</p> <p>c) Would the habitat be able to survive with potential nitrogen deposition and air pollutants emanating from the road below, given the summary in paragraph 8.8.8 of ES Chapter 8 [APP-039]?</p>	<p>grassland road verges (2019) which has been developed following successful calcareous grassland creation and management on schemes such as the Weymouth relief road.</p> <p>Further meadow areas where calcareous grassland is proposed will either be managed by National Highways or by landowners under Section 253 legal agreements with a management specification. Further work on habitat creation including soil testing and engagement with specialist contractors will commence at detailed design.</p> <p>Monitoring of grasslands will be secured by commitment BD45, within the Environmental Statement (ES) Appendix 2.1 Environmental Management Plan (EMP) (Document Reference 6.4, APP-317). The detail and duration of management and monitoring plans will be developed for the final iteration (end of construction stage) of the EMP and EMP Annex D Landscape and Ecological Management Plan (LEMP) (Document Reference 6.4, APP-321) towards the end of the construction of the authorised development which is to contain:</p> <ul style="list-style-type: none"> • the environmental information needed for the future maintenance and operation of the authorised development; • the long-term commitments to aftercare, monitoring and maintenance activities relating to the environmental features and mitigation measures that will be required to ensure the continued long-term effectiveness of the environmental mitigation measures and the prevention of unexpected environmental impacts during the operation of the authorised development; and • a record of the consents, commitments and permissions resulting from liaison with statutory bodies. <p>All long-term monitoring commitments will be secured via the EMP to ensure the grasslands achieve target condition and remediation measures will be included should any corrective action be required. It is therefore considered that the full quantum of calcareous grassland stated would be successfully delivered.</p> <p>b) Calcareous grassland can be created using subsoil with little or no topsoil so there is no constraint to creating calcareous grassland on the Gloucestershire Way Crossing. Drainage detail on the bridge will be further developed at detail design stage to ensure adequate drainage for the habitat establishment and survival.</p>

Number	Directed to	Question	Applicant's Response
			<p>c) Calcareous grassland has successfully established on road verges, including on the existing A41, the M40 gorge and Weymouth relief road indicating that calcareous grassland habitat will establish and survive on the Gloucestershire Way crossing and other areas of the scheme. It should also be noted that nitrogen deposition is likely to reduce in the future as the use of electric vehicles increases due to government plans to end sales of new petrol and diesel cars in the UK by 2030.</p>

Number	Directed to	Question	Applicant's Response
1.3.5	Applicant, Natural England, Gloucestershire Wildlife Trust	<p>Wildlife Crossings</p> <p>a) What evidence is there to demonstrate the success/effectiveness of wildlife crossings, such as the one proposed here for the Gloucestershire Way, from other road schemes?</p> <p>b) Is it a robust solution to protect or provide for biodiversity in this manner?</p>	<p>a) A review of studies undertaken through the Conservation Evidence platform (a free, authoritative information resource designed to support decisions about how to maintain and restore global biodiversity) showed that 19 studies carried out over roads and railways between 1971 and 2014 in North America, Europe and Australia found that overpasses were used by a wide range of mammals, demonstrating the effectiveness of overpasses as a form of mitigation for habitat severance and fragmentation as a result of linear infrastructure projects.</p> <p>In 2011, the Highways Agency reported in A review of bat mitigation in relation to highway severance that few green bridges in the UK had been installed, and specifically for bat mitigation, and therefore had not been subject to bat-specific monitoring, though more UK-based evidence has been published in recent years. For instance, evidence has been published by J. Altringham & A. Berthinussen in 2015: "<i>Development of a cost-effective method for monitoring the effectiveness of mitigation</i>" which found that one green bridge was used by 97% of bats that crossed the road. Importantly, a higher proportion of bats crossing the road used the green bridge, rather than an available underpass below the same road crossed by the green bridge (97% vs 2.4%).</p> <p>Another successful example is the A21 Scotney Castle Green Bridge in Kent. Six years after its construction, breeding dormice were recorded on the A21 Scotney Castle green bridge. A wealth of wildlife has also been recorded using the bridge including deer, foxes and badgers. Bats were found to be using the bridge as a flyway across the bypass. The bats were using the vegetated part of the bridge to navigate over the dual carriageway rather than the hard feature of the bridge itself.</p> <p>Anecdotal evidence published by Bach et al. in 2005 in Fachbeitrag Fledermäuse an ausgewählten grünbrücken found that in Germany, green bridges were better used than road bridges by bats. These bridges were generally designed with vegetation planted to recreate a 'semi-natural flight line'. Bach et al. (2005) also noted that, with regards to bats, the most important factors for a well-built green bridge seem to be good guiding structures on the bridge and a good connection to the surrounding habitat network. Additional observations noted in a Natural England review in 2015 in Green Bridges: A literature review (NECR181) suggest that an optimal green bridge should contain at least a double row of hedges and good</p>

Number	Directed to	Question	Applicant's Response
			<p>connections on both sides to preserve any established flight paths. These factors have been incorporated into the design of the Gloucestershire Way crossing. Monitoring before and after construction will be key to assess the effectiveness of the Gloucestershire Way crossing and all other wildlife crossing structures on the scheme. This monitoring is secured through commitment BD44 within the Environmental Statement (ES) Appendix 2.1 Environmental Management Plan (EMP) (Document Reference 6.4, APP-317).</p> <p>b) The Gloucestershire Way crossing is a robust solution given the baseline data and the need for a crossing over the road at this location. This multi-purpose green bridge provides a link between bolstered areas of habitat, with the connectivity adding resilience to the local ecological network.</p> <p>Wildlife crossings are a robust solution to both protect (by reducing collision risk and habitat fragmentation) and provide for biodiversity (through the planting of the bridge deck which, in itself, will provide habitat for a range of species including invertebrates, reptiles and small mammals as well as bats and badgers).</p>

Number	Directed to	Question	Applicant's Response
1.3.6	Applicant	<p>Wildlife Crossings</p> <p>a) Apart from the areas of crossing over the new A417, is wildlife exclusion fencing to be erected along the entire length of the new A417 to prevent animal collisions?</p> <p>b) Otherwise, how else would the wildlife crossing be promoted, and animal mortality reduced?</p>	<p>a) Badger fencing is proposed throughout the scheme to prevent traffic collisions and direct badgers and other wildlife to defined crossing points. Badger fencing is shown on the Environmental Statement (ES) Figure 7.11 Environmental Masterplan (Document Reference 6.3, APP-166 to APP-192).</p> <p>b) The planting of woodland and hedgerows has also been designed to passively direct wildlife to defined safe crossing points such as the overbridges and underpasses. These measures would reduce animal collisions and associated mortality.</p>
1.3.7	Applicant	<p>Ancient Woodland Protection</p> <p>a) Whilst a 15m wide fenced cordon around the Ancient Woodland might prevent compaction or damage, what measures are proposed to limit or reduce the effects of nitrogen deposition on the woodland flora?</p> <p>a) b) Paragraph 8.10.263 states there are no feasible mitigation measures to reduce the predicted increase, but could a further buffer distance be beneficial?</p>	<p>a) The following measures are proposed to limit or reduce the effects of nitrogen deposition on the woodland flora:</p> <ul style="list-style-type: none"> • During preliminary design, impacts during construction have been limited by placing a construction compound and associated vehicular movements to the south of the new road alignment, further away from the woodland. • The road alignment and roundabout have been moved as far south as possible from Ullen Wood. • Woodland planting is included in the landscape design to provide a buffer between Ullen Wood and the new road. 2.1 ha of this woodland planting is situated adjacent to Ullen wood in a location where the predicated change in Nitrogen deposition is below the 0.4kg N/ha/yr threshold for habitat degradation to compensate for the predicted habitat degradation to 2.1 ha within the woodland. Woodland planting in this location is shown on Environmental Statement (ES) Figure 7.11 Environmental Masterplan Sheet 8 of 25 (Document Reference 6.3, APP-175). • Further enhancement measures in the form of conservation woodland management measures for Ullen Wood are being pursued in conjunction with Cotswold National Landscape and relevant the landowners. Enhancement measures would aim to alleviate existing pressures on the woodland for example from browsing deer making the woodland more resilient to other environmental pressures as described in paragraphs 8.9.116 of the ES Chapter 8 Biodiversity (Document Reference 6.2, APP-039). <p>b) Detailed consideration has been given to balancing the impacts of the scheme on competing environmental constraints, and for mitigation to alleviate the more severe impacts wherever possible. In this instance a buffer of over 100m would be required</p>

Number	Directed to	Question	Applicant's Response
			<p>to avoid any adverse effects due to nitrogen deposition from vehicle emissions but this is not feasible for this scheme. A greater buffer than that proposed between the road and Ullen Wood would reduce the amount of woodland that experiences adverse effects from increased nitrogen deposition, however, the road alignment and roundabout have been located as far south as possible from Ullen Wood. It is not possible to move the road any further south due to other ecological constraints, such as Emma's Grove woodland.</p>
1.3.8	Applicant	<p>Ancient Woodland Compensation Paragraph 8.9.116 refers to "Opportunities will be sought to expand the woodland restoration project to additional areas of Ullen Wood, in conjunction with CCB and the landowner/s. The aim would be to reduce the impact of typical threats and pressures to ancient woodland that are relevant to Ullen Wood such as browsing by deer, decline in woodland management and increasing levels of shade. Enhancement measures would aim to alleviate these pressures and improve the overall conservation status of the ancient woodland by improving woodland structure, creating variation of light conditions in the woodland and increasing diversity of the ground flora." How is it proposed this would be secured? (A planning Obligation or other legal instrument?)</p>	<p>The commitment to explore opportunities to expand the woodland restoration project to additional areas of Ullen Wood is included within the Environmental Statement (ES) Appendix 2.1 Environmental Management Plan (EMP) (Document Reference 6.4, APP-317).</p> <p>It should be noted that these measures are not proposed as compensation for the identified air quality impacts on the ancient woodland. Ancient woodland compensation comprises woodland habitat creation within the boundary of the scheme, as described in paragraph 8.10.267 of ES Chapter 8 Biodiversity (Document Reference 6.2, APP-039). The measures referred to in paragraph 8.9.116 are not providing mitigation or compensation for a significant effect upon ancient woodland, rather they represent a commitment to seek additional ecological enhancement of the woodland.</p> <p>Discussions have taken place with Cotswold Conservation Board (CCB) who have agreed to ongoing engagement on the enhancement measures throughout the detailed design stages of the scheme – see the draft Statement of Common Ground with CCB in Annex E of the Statement of Commonality at Deadline 1 (Document Reference 7.3 Rev 1). National Highways is currently seeking to engage with landowners of the woodland areas and would seek separate agreements with landowners and CCB in order to deliver the enhancement measures identified.</p>
1.3.9	Applicant	<p>Emma's Grove Woodland – Ancient Woodland a) The ExA, on its USI, were able to access Emma's Grove via the public footpaths. Could the</p>	<p>a) Emma's Grove is accessible via the Gloucestershire Way long distance footpath which passes through the woodland. This allowed a broad habitat assessment to be undertaken during the initial Extended Phase 1 Survey in 2017, via a public right of way which does not permit access to the entire woodland. It would not have been appropriate to undertake detailed habitat or species surveys without landowner</p>

Number	Directed to	Question	Applicant's Response
		<p>Applicant explain what access issues it faced that prevented initial adequate survey or investigation of this land?</p> <p>b) Have the results of the 'further' survey or scoping work been undertaken at Emma's Grove Woodland to determine if it comprises Ancient Woodland? If not, why not?</p> <p>c) Should a worst-case scenario be adopted in the event that the further surveys confirm the presence of Ancient Woodland?</p>	<p>permission, especially bat surveys requiring access at night or dormouse surveys which require survey equipment to be left on site.</p> <p>Land access for all surveys was refused by the landowner until January 2021, after which species specific surveys were possible. Seasonal constraints for surveys meant that these surveys only commenced in Spring 2021 and were not completed in time for inclusion in ES Chapter 8 Biodiversity (Document Reference 6.2, APP-039).</p> <p>b) Further National Vegetation Classification (NVC) survey was undertaken within Emma's Grove woodland on 5 May 2021 to classify the woodland communities to complete the baseline information. However, this further work was not required to determine whether Emma's Grove is ancient woodland or not. Research of historical mapping confirms that Emma's Grove is not ancient woodland.</p> <p>Numerous cartographic sources dating between 1577 and 1800 were consulted in order to investigate whether the woodland surrounding the barrows would qualify as Ancient Woodland. Historical mapping does not show woodland at this location prior to 1600AD which is the date from which a continuously wooded area is considered ancient, in accordance with the Woodland Trust's guidance and the standing advice on Ancient woodland, ancient trees and veteran trees: protecting them from development from Natural England and the Forestry Commission. The northern half of the woodland first appears on the Ordnance Survey 25 inch first edition map, produced between 1844 and 1888. The southern half of the woodland is younger beech plantation woodland. Whilst the woodland does contain ancient woodland indicator species, it is not considered 'ancient' as per the definition based on historical records.</p> <p>c) No further surveys have been completed in order to confirm the presence of Ancient woodland as per answer to question (b). Emma's Grove woodland is assessed as priority habitat 'lowland mixed deciduous woodland' of national importance. Mitigation is proposed on that basis with the same protective measures being applied for the retained woodland at Emma's Grove as for ancient woodland and veteran trees as stated in paragraphs 8.9.30 – 8.9.33 of the ES Chapter 8 Biodiversity (Document Reference 6.2, APP-039).</p>

Number	Directed to	Question	Applicant's Response
1.3.10	Applicant	<p>Emma's Grove Woodland – Protected Species and Habitats</p> <p>a) Has any further survey or scoping work been undertaken at Emma's Grove Woodland to determine the presence of habitats and species (for example, bats)?</p> <p>b) What worst-case scenario principles have been adopted in this instance?</p>	<p>a) Further surveys have taken place in Emma's Grove during the 2021 survey season, including those for bats, dormice, badgers and National Vegetation Classification (NVC). Results of these surveys have not changed the valuation of associated ecological receptors and mitigation proposed at Emma's Grove.</p> <p>The NVC survey reports part of the woodland as woodland community W8f – Ash (<i>Fraxinus excelsior</i> –woodland with wild garlic (<i>Allium ursinum</i>) sub-community) and the southern half does not classify as a clear NVC community, being largely beech plantation.</p> <p>No badger setts or evidence of dormice have been recorded within Emma's Grove during the 2021 surveys. Whilst trees with bat potential were identified during ground level tree assessments, further tree climbing surveys and/or emergence surveys did not record any roosting bats at the time of survey. Pre-construction bat surveys will be undertaken prior to felling of trees with roosting potential.</p> <p>b) Until January 2021 limited access was available to Emma's Grove via a public footpath and it was therefore only possible to broadly assess the potential for the woodland habitats to support protected species. Using this broad habitat assessment, desk study data and data collected from the wider scheme surveys, assumptions of species presence and likely absence was made for the Environmental Statement (Document Reference 6.2, APP-032 to APP-049). The assessment assumptions and limitations applied, including worst case scenario principles for Emma's Grove, are set out in section 5 of Chapter 8 Biodiversity (Document Reference 6.2, APP-039).</p> <p>It was considered that due to the mature nature of the woodland, Emma's Grove would provide suitable bat roosting habitat. Dormice were not considered likely to be present due to the relatively isolated nature of the woodland and absence of results throughout the wider scheme. Woodland habitat is suitable for badgers. Pre-construction surveys for badgers would identify any active badger setts prior to construction but it is considered that the mitigation proposed in the form of culverts and the Gloucestershire Way crossing would allow permeability through the scheme should another badger sett been recorded in Emma's Grove and surrounding fields. The results of the surveys undertaken in Emma's Grove in 2021 between March and September have not changed the assessment or mitigation proposed for these species or habitat.</p>

Number	Directed to	Question	Applicant's Response
1.3.11	Applicant	<p>Emma's Grove Woodland - Mitigation</p> <p>a) Would the mitigation measures detailed in ES Chapter 8 paragraph 8.9.21 be applied to Emma's Grove Woodland if it was discovered that this site did indeed comprise Ancient Woodland or would alternate measures be required?</p> <p>b) Is there sufficient margin between the Proposed Development and Emma's Grove to install such mitigation?</p> <p>c) c) Is there potential to implement a woodland restoration programme similar to that referred to in reference to Ullen Wood as referenced above and how could this be secured?</p>	<p>a) The mitigation measures described in paragraph 8.9.21 of ES Chapter 8 Biodiversity (Document Reference 6.2, APP-039) with reference to Ullen Wood ancient woodland are also proposed at Emma's Grove woodland. Specifically, a 15m buffer would be implemented between the retained areas of woodland and all construction activities, haul roads and compound facilities as best practice to avoid direct impacts to the woodland as stated in paragraphs 8.9.30 – 8.9.33.</p> <p>b) Yes. A 15m buffer zone is available and represents the sufficient margin for such mitigation. Within the 15m buffer zone to protect the retained area of Emma's Grove the planting of additional woodland and scrub, and translocation of coppiced hazel stools and associated soil is proposed to compensate for woodland loss.</p> <p>c) A woodland restoration scheme is not required at Emma's Grove. However, selective clearance of vegetation (low level scrub), in agreement with an ecologist and arboriculturist, is proposed at the locations of the round barrows along with interpretation boards to educate visitors of the heritage features within the woodland. This commitment, reference CH6, is secured within the ES Appendix 2.1 Environmental Management Plan (EMP) (Document Reference 6.4, APP-317).</p>
1.3.12	Applicant	<p>Cotswolds Beechwoods Special Area of Conservation</p> <p>a) The Statement to Inform Appropriate Assessment details further analysis being required for the Cotswolds Beechwoods Special Area of Conservation. When will this analysis be carried out and will the results be available to the Examination?</p> <p>b) If not, what reassurance can the ExA have that there is no scientific doubt regarding effects and impacts on the designated asset?</p>	<p>a) The Habitats Regulations Assessment: Statement to Inform Appropriate Assessment (SIAA) (Document Reference 6.5, APP-415) does not identify a requirement to undertake any further analysis to inform the assessment of impacts of the proposed scheme upon Cotswolds Beechwoods Special Area of Conservation (SAC). As noted in section 9 of the SIAA, the Applicant agreed with Natural England in April 2020 that analysis of existing visitor survey data should be undertaken to consider potential recreational impacts on the Cotswolds Beechwoods SAC. That analysis was since undertaken and sufficient information was available at the time of writing the SIAA to support its conclusions around potential effects on the Cotswolds Beechwoods SAC. Natural England agree with the conclusions of the SIAA as stated in their letter sent by email and dated 01 April 2021 (Natural England ref 348579). This is now submitted as Appendix A within this document. No further information is proposed to be presented to the Examining Authority in support of this document.</p>

Number	Directed to	Question	Applicant's Response
			<p>b) The best available scientific evidence has been analysed to predict impacts upon the qualifying habitats of Cotswolds Beechwoods SAC as documented within the SIAA. This document concludes that the scheme would not result in an increase in recreational pressure that would damage the qualifying features of the SAC, because integral measures within the scheme will divert visitors from the SAC. The SIAA acknowledges that there is a degree of uncertainty in this conclusion because it is (unavoidably) based upon predictions of future visitor behaviour that cannot be empirically tested. The precautionary principle has therefore been applied and it has been assumed that the integral measures within the scheme may not prevent a small increase in visitor numbers to the SAC arising from the scheme. As such, mitigation is identified within the SIAA to address this risk. With these additional precautionary mitigation measures in place, it is considered that there is no scientific doubt regarding the conclusion of no significant adverse effect upon the integrity of Cotswold Beechwoods SAC either alone or in combination with other plans or projects.</p>
1.3.13	Applicant	<p>Section 28E of the WCA 1981 Can the Applicant comment on Natural England's concerns about the Applicant's intended dis-application of Section 28E of the Wildlife and Countryside Act 1981 at paragraphs 54 and 55 of its letter attachment to its RR [RR-080]?</p>	<p>The Consents and Agreements Position Statement (Document Reference 7.2, APP-418) sets out how consent is being sought to carry out works within a SSSI under the draft Development Consent Order (dDCO). Consent for works within the Crickley Hill and Barrow Wake SSSI would ordinarily be required under the Wildlife and Countryside Act 1981. Discussions with Natural England are ongoing in relation to the disapplication of sections 28E, 28G and 28H of the Act.</p> <p>The Applicant notes that there are two recent examples of made orders which included the disapplication of s.28E; the A14 Cambridge to Huntingdon Improvement Scheme and the A303 Stonehenge (Amesbury to Berwick Down) Scheme.</p>
1.3.14	Applicant, Natural England, GCC, TBC, CDC and CCB	<p>Barrow Wake Car Park What would be the effects of closing the Barrow Wake car park, taking into account the need to manage recreational pressure within the Crickley Hill and Barrow Wake SSSI and for recreational use in the area generally?</p>	<p>In National Highways' opinion, a potential closure of the car park, subject to any assessments led by Gloucestershire County Council as the relevant highway authority, is likely to increase the need to manage recreational pressure elsewhere as a result of parking displacement. However, this has not been assessed as part of our proposals for the A417 Missing Link because the removal or relocation of Barrow Wake car park is not part of the scheme.</p>
1.3.16	Applicant,	<p>Great Crested Newt Licence</p>	<p>Based on the findings of baseline surveys presented within the Environmental Statement (ES) (Document Reference 6.2, APP-031 to APP049) and a further survey of</p>

Number	Directed to	Question	Applicant's Response
	Natural England	<p>a) Based upon the findings of the Environmental Statement and the studies thereto, is it likely that there will be a requirement for a great crested newt license to be sought and obtained by the Applicant prior to construction?</p> <p>c) Has the Applicant sought a letter of no impediment?</p>	<p>four ponds using eDNA sampling in April and May 2021, a European Protected Species (EPS) licence is not being sought prior to construction. Non-licenced precautionary methods of working (to include sensitive timing of works) to be overseen by a suitably qualified ecologist will be implemented, as documented in commitments BD29 and BD33 of ES Appendix 2.1 Environmental Management Plan (EMP) (Document Reference 6.4, APP-317). As such, there would be no impact upon the great crested newt populations through mortality or significant habitat loss as stated in paragraphs 8.9.52 and 8.10.156 - 8.10.160 ES Chapter 8 Biodiversity (Document Reference 6.2, APP-039).</p> <p>This approach to great crested newt mitigation is guided by Natural England advice within the instructions page of the European Protected Species Method Statement, stating that consultants should avoid risk-averse mitigation that is of little benefit to great crested newt conservation, and that licensing should be used where there are tangible impacts on newt populations (of which no such impacts are considered to occur on this scheme).</p> <p>This proposal has been discussed with the species specialist at Natural England on 19 August 2021, as stated in the Statement of Common Ground with the Natural England in Appendix C of the Statement of Commonality (Document Reference 7.3, APP-419). Natural England agreed that avoidance of significant impacts to populations should be the priority and that licensing should be a last resort. Natural England is satisfied with the survey information presented and that no further survey effort is required now. On the advice of Natural England, repeat surveys for several ponds (both eDNA and population surveys) will be carried out in 2022 so that survey data would be valid if an EPS licence became a requirement due to additional impacts to GCN becoming proposed, i.e. through additional works to those reported in ES. This is not anticipated and is being carried out as a precautionary measure.</p> <p>A Letter of No Impediment has not been sought for great crested newts, as a non-licenced approach is proposed due to the small-scale nature of the proposed works or distance of the works from the ponds where animals are present. Natural England are unable to provide Letters of No Impediment for non-licenced works. Natural England have no objections to the scheme in relation to great crested newts (see RR-080).</p>
1.3.17	Applicant	Scheme Boundary	Section 8.6.5 of ES Chapter 8 Biodiversity (Document Reference 6.2, APP-039) states:

Number	Directed to	Question	Applicant's Response
		In table 8-5, define what is meant by 'scheme boundary'. Does this mean from the edge of the limits of deviation, edge of the Order land or other definition?	<p><i>"The study area for each survey was based upon the latest iteration of the scheme boundary at the stage the surveys commenced. Therefore, references to scheme boundary in Table 8-5 relate to the boundary at the time of survey which is stated in Table 8-6."</i></p> <p>The reference to scheme boundary in the context of Table 8.5 therefore does not correlate with the limits of deviation, Order land or another definition but means the proposed boundary at the time of the survey.</p>
1.3.18	Applicant	<p>Magic Maps Notwithstanding that they contain representative polygons only, could the MAGIC maps used to inform the desk study be provided so as to give a visual impression of the environmental assets in proximity to the Proposed Development?</p>	The statutory and non-statutory environmental designations shown on MAGIC maps are illustrated on ES Figure 1.3 Environmental Constraints Plan Sheets 1 and 2 (Document Reference 6.4, APP-053 and APP-054) and Environmental Features – Statutory or Non-Statutory Sites or Features of Nature Conservation (Document Reference 2.9, APP-016).
1.3.19	Applicant	<p>Ash Dieback Would the effects of ash dieback affect any of the landscape and visual representations provided with the ES, or give rise to a need to provide further planting beyond that initially envisaged to screen or soften the visual effects of the Proposed Development?</p>	<p>The rate and extent of tree loss among retained trees as a result of pest, disease or death is difficult to predict and has not been factored into the landscape and visual representation provided in Environmental Statement (ES) Chapter 7 Landscape and visual (Document Reference 6.2, APP-038) or ES Figure 7.10 Photosheets and Visualisations Part 1 to 8 (Document Reference 6.3, APP-158 to APP-165).</p> <p>The Applicant would note that the majority of viewpoints shown within the landscape proposals were selected because they would have views of the scheme and are not generally locations that are screened by existing trees and woodland.</p> <p>No ash will be planted or replanted as part of the scheme due to the spread of ash dieback disease. The final species mix would be agreed in consultation with the Cotswolds Conservation Board (CCB) and would take into consideration the CCB 'Position statement on woodland creation and tree planting in the Cotswolds AONB – tree species and provenance'. Details of the scheme tree and woodland planting can be found by referring to ES Figure 7.11</p>
1.3.20	Applicant	Overbridges	a) The location of the Stockwell and Cowley overbridges has been informed by the need to mitigate the severance of existing infrastructure and minimise impact on the landscape and environment.

Number	Directed to	Question	Applicant's Response
		<ul style="list-style-type: none"> a) What has influenced the location of the other overbridges at Stockwell and Cowley? b) Are the overbridges provided in areas where there have historically been high levels of wildlife movements observed, thus designed to meet the natural need? c) Were other locations for these overbridges considered in the optioneering stage and discounted? If so, why? 	<p>Both overbridges have been located and aligned to closely replicate the existing alignment, minimising the impact on the landscape character by reusing existing infrastructure footprint where possible to prevent further disruption to field pattern, field boundaries, and landscape features.</p> <p>ES Chapter 2 The Project (Document Reference 6.2, APP-033) describes how the location and alignment of the overbridges provides the planting of a continuous native species-rich hedgerow, to provide continuity from the tree lines already proposed leading up to the bridges, which replace the existing treeline features in the landscape.</p> <p>Ecological surveys identified the presence and movement of wildlife. The bridges have been located to closely align with existing movements to minimise impact on existing behaviour patterns.</p> <p>The way in which the overbridge locations have been landscape-led is detailed in the Design Summary Report (Document Reference 7.7, APP-423).</p> <ul style="list-style-type: none"> b) Both Cowley and Stockwell overbridges mitigate the effect of severance that results in fragmentation of existing habitat. Wildlife survey information has shown existing presence and movement in the vicinity and the proposed overbridges will provide mitigation. ES Confidential Figure 8.4 Combined Bat Survey Results Sheet 5 of 6 (Document Reference 6.3, APP-201) shows this information. c) Other locations were considered during the development of the scheme. However, the retention and use of existing infrastructure in the landscape, along with the survey results for existing habitat and wildlife movements resulted in a narrow range of locations in which the overbridges would provide effective mitigation.
1.3.21	Applicant, Natural England	<p>Water Features – Harm to Wildlife</p> <ul style="list-style-type: none"> a) Would the introduction of attenuation ponds and drainage basins in close proximity to the Proposed Development encourage wildlife into areas where the potential for harm or strike increases? 	<ul style="list-style-type: none"> a) Attenuation basins are a requirement of the highways design, hence the proximity to the road network and are not intended to attract wildlife. Not all basins would provide wetland habitat, with some offering ephemeral wet habitat only following heavy rainfall. The design of each basin, with regard to the amount of water to be retained in all or part of the basins, would be progressed at detailed design based on further ground and hydrological modelling. Due to the ephemeral nature of some of the basins, and/or the woodland and scrub planting in the areas, it considered unlikely that the basins would attract flying wildlife such as birds and bats to cross

Number	Directed to	Question	Applicant's Response
		<p>b) Would it be likely species might cross the A417 in new locations to access the water features, altering the foraging and distribution habits?</p>	<p>the road at carriageway heights, that would increase the risk of mortality or injury through vehicle collision. Badger fencing throughout the scheme would also prevent larger mammals from crossing the road to access attenuation basins.</p> <p>b) It is considered unlikely that the provision of attenuation basins would alter foraging and distribution patterns for species such as bats and birds, especially where the attenuation basins only offer occasionally wet habitat. As described in part a) the final design of basins to determine the level and duration of wet habitat will be developed during detailed design. The attenuation basins would not form habitat stepping-stones to similar habitat either side of the road that may encourage species to cross the road.</p> <p>Bats have been recorded throughout the scheme and in the locations of the majority of the attenuation basins as shown in Environmental Statement (ES) Confidential Figure 8.4 Combined Bat Survey Results (Document Reference 6.3, APP-197 to APP-202) and therefore the distribution of bats would not be altered as a result of the attenuation basins. The planting design includes woodland, hedgerows and scrub adjacent to the road which will help create corridors for wildlife to follow to defined crossing points in the form of overbridges, culverts or underpasses. Badger fencing and stone walls are also proposed which would prevent or discourage non-flying wildlife from crossing the A417 and passively direct wildlife to the defined safer crossing points.</p>
1.3.22	Applicant	<p>Water Features – Nitrogen Deposition How would the new attenuation ponds be protected from nitrogen deposition, to prevent any subsequent encouragement of nitrogen-tolerant species into the locality?</p>	<p>Attenuation basins are provided as a requirement of the highway design to provide attenuation in the event of increased road drainage discharge or pollution events. No specific protection from nitrogen deposition from vehicle emissions is proposed, although the majority of basins would be screened from the road by woodland planting.</p> <p>As stated in answer to question 1.3.21, the basins would not be permanently wet and therefore would be seeded with a neutral species-rich grassland mix. The basins would be managed and monitored in accordance with commitment BD45, secured within the Environmental Statement (ES) Appendix 2.1 Environmental Management Plan (EMP) (Document Reference 6.4, APP-317) and ES Appendix Outline EMP Annex D Landscape and Ecological Management Plan (Document Reference 6.4, APP-321) to ensure that establishment of desirable species is achieved.</p>

Number	Directed to	Question	Applicant's Response
1.3.23	Applicant, Natural England, Wildlife Trust	<p>Edge Habitat</p> <p>a) Is a 2m buffer between works compounds and hedgerows sufficient to maintain 'edge habitat' for wildlife as stated in ES Chapter 8 paragraph 8.9.47?</p> <p>b) Should this separation distance be wider to avoid noise, vibration, dust and disturbance through human activity?</p>	<p>a) A minimum buffer of two metres from the edge of retained hedgerows is proposed between works compounds and hedgerows. This is considered to be sufficient to maintain the edge habitat at the base of a hedgerow for the benefit of small mammals and other wildlife such as birds, reptiles and invertebrates to commute, forage or shelter within or along the hedgerow (Website www.farmwildlife.info, accessed 09.12.2021). The buffer may be wider where root protection zones are implemented for mature trees within a hedgerow in accordance with British Standard 5837:2012 Trees in relation to design, demolition and construction, or where there may be constraints relating to protected species such as a badger sett or bat roost where location specific protective measures will be developed to avoid adverse effects. Such buffers are for the temporary construction phase only, after which, associated protective fencing will be removed.</p> <p>Two metres is the distance required for a buffer under the Good Agricultural and Environmental Conditions (GAEC) 7a - Boundaries guidance from the Rural Payments Agency.</p> <p>This Department for Environment, Food and Rural Affairs (Defra) requirement is to not cultivate land or apply fertilisers or pesticides within 2m of the centre of a hedgerow. In addition, the measures to control noise and dust at source are secured by the Environmental Statement (ES) Appendix 2.1 Environmental Management Plan (EMP) (Document Reference 6.4, APP-317).</p> <p>b) As explained in the response to Q1.3.23(a) above, a minimum two-metre fenced buffer from the edge of the hedgerow to the works compounds and measures in the EMP is considered sufficient to avoid any significant effects from the temporary construction activities associated with the scheme.</p>
1.3.24	Applicant	<p>Works to Buildings</p> <p>Does the dDCO authorise works to buildings (such as suggested improvements to the derelict World War II structure) and, if so, when will details be known regarding the works and who will be consulted over the content of those details?</p>	<p>The draft Development Consent Order (dDCO (Document Reference 3.1 (Rev 1), APP-022) does authorise works to specific buildings as described in the work numbers forming part of the authorised development described in Schedule 1 to the dDCO (for example, the demolition of Woodside House and Crickley Tractors Building 28, which are confirmed bat roosts, under Work No. 1(m)).</p> <p>Article 22 (protective works to buildings) of the dDCO gives the undertaker the power to carry out protective works to any building which may be affected by the authorised development as the undertaker considers necessary or expedient. Schedule 1 to the dDCO also covers other development to be carried out in connection with the</p>

Number	Directed to	Question	Applicant's Response
			<p>numbered works, which forms part of the authorised development. Those other works are listed on after the description of the numbered works within Schedule 1 to the dDCO and itemised from (a) to (l). Paragraph (b) provides for works consisting of “the strengthening, alteration or demolition of any structure”, subject to compliance with all other relevant protections within the dDCO.</p> <p>Details regarding potential mitigation works to buildings, such as the suggested improvements to the derelict World War II structure, will be developed during the detailed design stage. The general principles around the improvements to the structure have been discussed with Natural England and a Letter of No Impediment (Document Reference 8.7) has been issued on that basis and submitted at Deadline 1.</p> <p>The improvement details will subsequently be included as part of the formal bat mitigation licence application that will be submitted to Natural England following approval of the DCO. This is because this structure is a known bat roost, and therefore any proposed modifications (in this case to improve the condition of the roost and enhance it for other bat species) must be agreed and licenced by Natural England.</p> <p>Ongoing consultation will continue with Natural England during detailed design to ensure the final design of the improvements is acceptable.</p> <p>Where National Highways considers that protective works to buildings are necessary, the provisions within Article 22(5) ensure that National Highways must, except in the case of emergency, notify its intention to exercise its powers under Article 22 to the owners and occupiers at least 14 days in advance. Under Article 22(6), the owners and occupiers then have a right to serve a counter-notice requiring the question whether it is necessary or expedient to carry out the protective works or to enter the building or land to be referred to arbitration under Article 48 (arbitration).</p>
1.3.25	Applicant	<p>Bird Boxes</p> <p>a) What evidence is there to confirm that the provision of bird boxes is a successful means of attracting or supporting species such as tawny owl and kestrel?</p> <p>a) Is the provision of boxes alone sufficient to encourage the</p>	<p>a) Many conservation bodies including the Royal Society for the Protection of Birds and the British Trust for Ornithology (BTO) provide on their websites species specific nest boxes or designs for boxes for many bird species including both tawny owl and kestrel based on known use of boxes by these birds:</p> <p>Evidence of the use of nest boxes by kestrels and tawny owls can be found in the following articles;</p>

Number	Directed to	Question	Applicant's Response
		natural translocation of birds into other areas?	<ul style="list-style-type: none"> • M.Canham (1992) Nest boxes for Kestrels Research Information note 215, Forestry Commission • Johnson P.N. (1994) Selection and use of nest sites by barn owls in Norfolk, England, Journal of Raptor Research, 28, 149-153. <p>The BTO in their 'Best practice guidance for ringing and nest recording tawny owls' state that tawny owls are cavity nesters that readily take to artificial nest sites making them an ideal species to monitor using boxes. In addition, a tawny owl was observed emerging from an artificial nest box on a tree at National Star College during a bat survey undertaken for the project in September 2021.</p> <p>b) It is therefore considered that the provision of nest boxes located in suitable retained habitat is sufficient to attract and support birds, including tawny owl and kestrel, to move to new nest sites. The provision of new habitat alongside the box provision will encourage local populations of birds including kestrel and tawny owl to occupy these areas once the scheme is built and the woodland and tree planting is established.</p>
1.3.26	Applicant	<p>Ground Nesting Bird Habitat</p> <p>a) Will areas of grassland set aside for ground nesting birds be protected from human activity and how?</p> <p>b) Will measures be taken to discourage tracks and paths being created through frequent trampling/ use into such areas?</p> <p>c) Designated sites are referred to in individual aspect chapters where relevant, for example, European sites are identified in ES Chapter 8: Biodiversity [APP-039]. Breeding bird surveys were undertaken in April to June 2019 and wintering bird surveys were undertaken October 2018 and February 2019. Can the Applicant confirm if they will be</p>	<p>a) No measures have been identified to separate public access from areas proposed for use by ground nesting birds as it is currently the case that ground nesting birds, including skylarks, are nesting in this field with public rights of way crossing through it, including the Gloucestershire Way long distance footpath. These public rights of way will remain in the field with one additional footpath located adjacent to the proposed woodland planting.</p> <p>b) Public rights of way will exist in these areas as they do currently. Appropriate signage could be used to ask walkers to keep to public footpaths and keep dogs on leads during the bird nesting season. With this in place and the current habituation of birds to walkers, adverse effects on ground nesting bird populations are not anticipated.</p> <p>c) No further breeding bird surveys are proposed. The surveys undertaken to inform the environmental impact assessment are considered sufficient to inform the assessment and mitigation proposed with regard to breeding birds. However, a pre-construction survey for Schedule 1 birds (barn owl) is to be undertaken in 2022 and vegetation clearance (including that for ground nesting birds) will be scheduled outside of the breeding bird period wherever possible. Any vegetation clearance within the breeding bird period will be subject to checks for nests by an experienced</p>

Number	Directed to	Question	Applicant's Response
		<p>conducting further surveys to verify the initial survey results for bird species, or provide justification as to why these would not be required?</p>	<p>ecologist within 24 hours prior to the clearance. This measure is secured by commitment BD 25 in Environmental Statement Appendix 2.1 Environmental Management Plan (Document Reference 6.4, APP-317).</p>
<p>1.3.27</p>	<p>Applicant, Natural England</p>	<p>Construction Noise Effects Are the species of fish identified in paragraph 8.9.102 of ES Chapter 8 sensitive to noise and vibration (are they able to 'hear') and if so, would construction activities cause harm to or early displacement of these fish?</p>	<p>The species identified in paragraph 8.9.102 (European bullhead, European eel, brown trout and brook lamprey) of the Environmental Statement Chapter 8 Biodiversity (Document Reference 6.2 [APP-039]) do have the capacity to hear and so have the potential to be disturbed as a result of construction noise and vibration, with the potential exception of river lamprey. According to a review of hearing by lamprey and sturgeon, the scientific community has no data on hearing in lamprey (indeed, or even if they do hear). However, the ear in lamprey is relatively simple (unlike other species of fish, where there are specialisations that enhance hearing and widen the detectable bandwidths) and there is nothing with the structure of the ear or associated structures to suggest any specialisations that would make lamprey hearing 'specialists'. Lamprey are regarded as 'non-specialists' with respect to hearing ability, in part, as they do not possess a swim-bladder and therefore are not regarded to be sensitive to acoustic effects as they detect little or none of the pressure component of the sound (Popper N., 2005, A Review of Hearing by Sturgeon and Lamprey).</p> <p>The presence of the all species named in paragraph 8.9.102 in the tributary of Normans' Brook is yet to be confirmed, but the assessment has been carried out on a precautionary basis and assumed the presence of these species outlined in paragraph 8.9.102. Significant effects on populations of these species are not anticipated, as a result of noise and vibration effects (should they be present), given the localised nature of the works, proposed mitigation (which includes fish translocation) and the size/scale of the watercourse.</p> <p>Pre-construction surveys of the tributary of Normans' Brook (both upstream and downstream of the existing A417 culvert) to determine actual presence / absence and associated numbers of fish likely to be present within the tributary of Norman's Brook are proposed pre-construction; the results of these surveys will inform precise mitigation details. This is secured by commitment BD6 of Environmental Statement (ES) Appendix 2.1 Environmental Management Plan (EMP) (Document Reference 6.4, APP-317). The EMP includes a commitment for a Noise and Vibration Management Plan (NVMP) to be prepared. Specific mitigation to minimise potential impacts to fish species in Normans' Brook would form part of this commitment, should the presence of fish be confirmed in 2022 and such mitigation required.</p>

Number	Directed to	Question	Applicant's Response
1.3.28	Applicant	<p>Translocation Sites</p> <p>a) With regards to paragraphs 8.9.74 and 8.9.93, have any agreements been reached with landowners with regards to securing suitable translocation sites?</p> <p>b) When will all receptor sites be secured, and how would the dDCO or its control documents ensure such translocation agreements are binding?</p> <p>c) Would the dDCO need to authorise a 'right' to enter onto land for the purposes of translocation?</p> <p>d) How would translocation affect practices (for example, farming operations) on land in the vicinity of the receptor sites?</p>	<p>a) Gloucestershire Wildlife Trust (GWT) has confirmed that Crickley Hill Country Park can be used as a translocation site for Roman snails and reptiles, as confirmed in an email from Gareth Parry at GWT on 8th February 2021 and documented in Appendix F Draft Statement of Common Ground with Gloucestershire Wildlife Trust in the Statement of Commonality (Document Reference 7.3 Rev 1, APP-419). [REDACTED]</p> <p>b) [REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>c) National Highways will obtain the necessary landowner agreements to enable it to deliver the translocation activities required. We are confident that this will be secured with ongoing discussions</p> <p>d) [REDACTED] Reptiles are known to be present there already and therefore current management practices can continue that will not affect the success of a translocation receptor site [REDACTED]. The receptor site to be created on site within the DCO boundary is currently sheep grazed</p>

Number	Directed to	Question	Applicant's Response
			<p>pasture but would be owned by National Highways following DCO. A mosaic of habitat is to be created with grassland, woodland and scrub and could be managed with a conservation grazing regime. Adjacent land to the receptor site is sheep grazed pasture and a disused quarry where reptiles are already present. Neither land use will be affected by the receptor site.</p>
1.3.30	Applicant	<p>Landowner Agreement</p> <p>a) With reference to measure BD40 in the EMP, what solution would be followed if the landowner's agreement was not obtained?</p> <p>a) b) Would the land/ trees identified be subjected to further compulsory acquisition requests?</p>	<p>a) Commitment BD40 of Environmental Statement (ES) Appendix 2.1 Environmental Management Plan (EMP) (Document Reference 6.4, APP-317) refers to the use of veteranisation techniques in younger trees to create bat roosting features usually found on older veteran trees, in habitat identified by the ecologist.</p> <p>If landowner agreement(s) cannot be obtained, veteranisation techniques could be applied within the DCO boundary in other locations containing younger trees close to proposed veteranisation locations. . This can also be complimented by the erection of additional bat boxes on poles along existing hedgerows as well as newly created hedgerows. Commitment BD11 of ES Appendix 2.1 EMP (Document Reference 6.4, APP-317).</p> <p>b) No further compulsory acquisition powers, other than those applied for, will be needed in order to deliver this mitigation.</p>
1.3.32	Applicant, Natural England	<p>Land Surveys</p> <p>The ES reports some difficulties gaining access to land for surveys. To what extent does this mean that the knowledge of local ecology is not comprehensive, and are the assumptions that have been made in lieu of full survey results fair and reasonable for an informed assessment?</p>	<p>Assessment assumptions and limitations are stated in Section 8.5 of ES Chapter 8 Biodiversity (Document reference 6.2, APP-039).</p> <p>Whilst access to certain land parcels was not possible at the time of the assessment (primarily the area in and around Emma's Grove woodland), a precautionary approach was taken and a "reasonable worst case" valuation applied where necessary. It should be noted that access restrictions affected only a small percentage of the total study area (less than 5%). In addition, by surveying the wider local area including similar habitat types, this allowed a good understanding of what was likely to be present alongside available desk study records from the Emma's Grove area.</p> <p>This approach was deemed fair and reasonable to inform the assessment and suitable mitigation measures were included where relevant for all ecological receptors.</p> <p>Since the publication of the ES, access has become available, and the outstanding surveys were carried out during the 2021 survey season, namely for bats, dormice, badgers and National Vegetation Classification (NVC). It can be confirmed that none of</p>

Number	Directed to	Question	Applicant's Response
			the survey results compiled for the Emma's Grove area would affect the valuations of receptors presented or drive different mitigation requirements. The results of the further surveys do not affect the conclusions of the ES.
1.3.33	Applicant	<p>Habitats Regulation Assessment Can the Applicant confirm that there are no additional mitigation measures relied on in the HRA that are not included in the ES?</p>	<p>There are no additional mitigation measures relied upon in the Habitats Regulations Assessment: Statement to Inform Appropriate Assessment (SIAA) (Document Reference 6.5, APP-414) that are not included within the Environmental Statement (Document Reference 6.2, APP-030 to APP-416).</p> <p>Paragraphs 8.10.212 to 8.10.215 of the Environmental Statement (ES) Chapter 8 Biodiversity (Document Reference 6.2, APP-039) summarise the topic that is the primary focus of the SIAA, specifically the assessment of recreational visitor pressure on Cotswolds Beechwoods Special Area of Conservation (SAC).</p> <p>Paragraph 8.10.216 of ES Chapter 8 refers to further details being provided within the SIAA. The SIAA details precautionary mitigation measures proposed to control and guide recreational use of the Cotswold Beechwoods Special Area of Conservation (SAC). That precautionary mitigation is secured within the ES by way of commitment BD52 within ES Appendix 2.1 Environmental Management Plan (EMP) (Document Reference 6.4, APP-317), which states:</p> <p><i>“Subject to agreement, Highways England will work with Natural England and Stroud District Council, to agree specific measures to control recreational use of the Beechwood SAC. Such measures may include the provision of signage/ interpretation boards to raise public awareness of the value of ancient woodland and trees, and the importance of respecting measures installed to reduce root compaction.”</i></p> <p>The Applicant's response to ExA Question 1.3.41 explains the rationale for including precautionary mitigation measures in relation to the Cotswold Beechwoods Special Area of Conservation (SAC) as part of the scheme, as further detailed in the SIAA.</p>
1.3.34	Applicant, Natural England	<p>Scope of HRA The Applicant explains that it has consulted Natural England throughout the process. Point 6.16 of Table 4-1 in the Statement of Commonality [APP-419] states that in an email dated April 2021, Natural</p>	<p>a) The quoted conclusion from Natural England is from their letter sent by email and dated 01 April 2021 (Natural England ref 348579). This is now submitted as Appendix A within this document.</p> <p>b) Question not directed at Applicant</p> <p>c) Question not directed at Applicant</p>

Number	Directed to	Question	Applicant's Response
		<p>England stated it is "satisfied about the approach and conclusions of the draft HRA".</p> <p>a) A copy of this email has not been provided in the HRA Screening Report; can a copy of the e-mail be provided for completeness?</p> <p>b) Could Natural England confirm that they are satisfied with the scope of the Applicant's assessment of effects on European sites?</p> <p>c) Is NE content with the Applicant's approach to the in-combination assessment?</p> <p>c) Are there any other sites or site features that could be affected by the Proposed Development?</p>	<p>d) No, all European sites and site features that could be affected by the scheme, either alone or in combination with other plans or projects, are considered within the Habitats Regulations Assessment: Screening Report (Document Reference 6.5, APP-414).</p>
1.3.35	Applicant, Natural England	<p>Habitats Regulation Assessment The Department of the Environment, Food and Rural Affairs (DEFRA) published a policy paper on 1 January 2021 relating to changes to the Habitats Regulations 2017 following the United Kingdom's (UK) departure from the European Union. Explain whether this paper has any bearing on, or implications for the Proposed Development.</p>	<p>The policy paper relates to transferring functions from the European Commission to the appropriate authorities in England and Wales, so that the Conservation of Habitats and Species Regulations 2017 (as amended) (known as the Habitats Regulations 2017) operates effectively following the United Kingdom's (UK) departure from the European Union (EU). This transfer of functions is not considered to have any bearing on, or implications for the scheme.</p> <p>All other processes or terms within the Habitats Regulations 2017 remain unchanged.</p> <p>The Habitats Regulations Assessment: Screening Report (Document Reference 6.5, APP-414) and the Habitats Regulations Assessment: Statement to Inform Appropriate Assessment (SIAA) (Document Reference 6.5, APP-414 Habitats Regulations Assessment (Document Reference 6.5, APP414-5) have been prepared in accordance with Department for Environment, Food and Rural Affairs (Defra) guidance published on 24 February 2021, after the UK's departure from the EU.</p>
1.3.38	Applicant	<p>Fish ES Chapter 8: Biodiversity [APP-039] discusses absence of baseline fish</p>	<p>a) The upper reaches of the tributary of Norman's Brook describes the watercourse from its source in the east to the existing A417 culvert (Environmental Statement Figure 13.1 Surface Water (Document Reference 6.3, APP-262)). No dedicated fish</p>

Number	Directed to	Question	Applicant's Response
		<p>data from the upper reaches of the tributary of Norman's Brook.</p> <p>a) Can the Applicant provide further details of where the upper reaches of the tributary of Normans Brook is and explain the reason for lack of baseline data for fish species in the upper reaches of Normans Brook?</p> <p>b) Can the Applicant confirm that surveys for fish species were carried out in the upper reaches of the tributary of Normans Brook?</p>	<p>surveys were undertaken in the upper reaches of the tributary of Norman's Brook; however, fish habitat suitability surveys were conducted. The habitat suitability surveys concluded that the habitat in the upper reaches of the tributary of Normans' Brook had the potential to support a number of fish species but noted the significant barrier to fish migration posed by the existing A417 culvert, which extends a significant length downstream of the road. Notwithstanding this, the assessment assumed that a range of fish species may be present as set out in paragraph 8.9.102 of Environmental Statement Chapter 8 Biodiversity (Document Reference 6.2, APP-039). Proportionate mitigation was included for this range of fish species within the assessment.</p> <p>Dedicated fish pre-construction surveys of the tributary of Normans' Brook (both upstream and downstream of the existing A417 culvert) to determine actual presence / absence and associated numbers of individuals likely to present within the reach are proposed for summer 2022; the results of these surveys will inform precise mitigation details.</p> <p>b) For the reasons explained above, no specific surveys for fish species were carried out in the upper reaches of the tributary of Norman's Brook but fish habitat suitability surveys were conducted.</p>
1.3.39	Applicant	<p>Veteran Trees ES Chapter 8: Biodiversity [APP-039] describes the potential for the Proposed Development to increase nitrogen deposition on veteran trees and beech trees within the study area. A large, adverse significant effect has been determined.</p> <p>a) Can the Applicant confirm if the veteran trees/ veteran beech trees described in paragraphs 8.10.268 – 8.10.271 form part of the Cotswold Beechwoods SAC?</p> <p>b) Table 8-21 'summary of assessment of likely significant construction effects' describes</p>	<p>a) The veteran trees referred to in paragraphs 8.10.268 – 8.10.271 of ES Chapter 8 Biodiversity (Document Reference 6.2, APP-039) do not form part of the Cotswold Beechwoods SAC.</p> <p>Beech tree reference 196380 is within the DCO boundary and the other three trees referred to in paragraphs 8.10.268 - 8.10.271, referred to as EVT13, EVT42 and EVT98 in ES Chapter 5 Air Quality (Document Reference 6.2, APP-036) are further south towards Cirencester and Swindon but are within 200m of the Affected Road Network (ARN). Assessed ecological receptors are shown in ES Figure 5.4, Sheets 1-15 (Document Reference 6.3, APP-076 to APP-090). Beech tree 196380 (EVT21) is shown on Sheet 5 (APP-080), EVT13 is shown on Sheet 13 (APP-088) and the location of EVT42 and EVT98 are shown on Sheet 12 (APP-087).</p> <p>b) Three veteran trees (T57, T126 and T127) would be unavoidably lost as a result of the scheme as stated in paragraph 8.10.59 of ES Chapter 8 Biodiversity (Document Reference 6.2, APP-039). These trees are not the same trees referred to in paragraphs 8.10.268–8.10.271 and are required to be removed because they are</p>

Number	Directed to	Question	Applicant's Response
		one of the potential impacts as "loss of three veteran trees". Can the Applicant confirm if they are proposing to remove the veteran trees in question?	located under the proposed road alignment. Veteran trees to be lost and those retained within or adjacent to the DCO boundary are indicated in ES Figure 7.9 Retained Vegetation (Document Reference 6.3, APP-152 to APP -157).
1.3.40	Applicant	<p>Other Consents Can the Applicant provide an update on the progress made towards obtaining a Letter of No Impediment regarding European Protected Species?</p>	<p>A Letter of No Impediment has been obtained from Natural England in relation to bats (European protected species), which can be found in Document Reference 8.7 submitted at Deadline 1. No other European protected species required a Letter of No Impediment.</p> <p>In addition, Letters of No Impediment have been obtained from Natural England for two (non-European) protected species, namely Roman snails and badgers, which can also be found in Document Reference 8.7 submitted at Deadline 1.</p>
1.3.41	Applicant, Natural England	<p>Beechwoods SPA In the Habitats Regulation Assessment Statement to inform Appropriate Assessment [APP-415] the conclusions section includes: Paragraph 10.1.2 which states that there is uncertainty of the efficacy of integral mitigation measures "and it would therefore not be robust to draw a conclusion of no adverse effect on integrity based on those measures. Therefore, additional precautionary mitigation will be provided in the form of measures to control recreational use of the SAC to address this uncertainty; and 10.1.3 which states In conclusion, there will be no significant adverse effect upon the integrity of Cotswold Beechwoods SAC as a result of the scheme, either alone or in combination with other plans or projects."</p>	<p>a) The precautionary mitigation measures proposed to control and guide recreational use of Cotswold Beechwoods Special Area of Conservation (SAC) include the provision of signage/interpretation boards to raise public awareness of the value of ancient woodland and trees, and the importance of respecting measures installed to reduce root compaction. This is secured by commitment BD52, within the Environmental Statement (ES) Appendix 2.1 Environmental Management Plan (EMP) (Document Reference 6.4, APP-317), subject to agreement with Stroud District Council and Natural England, as the lead authors of the draft Cotswold Beechwoods SAC Recreation Mitigation Strategy. We understand that the relevant land is managed by Natural England. National Highways will engage to progress any appropriate proposals.</p> <p>There is no predicted increase in visitor numbers to the Cotswold Beechwoods SAC as a result of the scheme, based on the results of visitor surveys. As detailed within the Habitats Regulation Assessment: Statement to inform Appropriate Assessment (SIAA) (Document Reference 6.5, APP-415) (see, for example, paragraph 5.6.1) new alternative recreational provision integral to the scheme will divert visitor pressure away from the SAC. However, as future visitor behaviour cannot be predicted with absolute certainty, additional precautionary mitigation is proposed.</p> <p>The principle of the precautionary mitigation measures to help guide visitor behaviour has been agreed with Natural England. The specific number and location of such measures has not been agreed at this stage because the draft Cotswold</p>

Number	Directed to	Question	Applicant's Response
		<p>a) Can the Applicant confirm what the 'additional precautionary mitigation' measures are which are proposed for the Cotswold Beechwoods SAC? The Applicant is requested to identify any factors that might affect the certainty of the implementation of the additional precautionary mitigation measures.</p> <p>b) Can Natural England confirm if they agree that there will be no adverse effects on the integrity of the Cotswold Beechwoods SAC without the additional precautionary mitigation measures?</p>	<p>Beechwoods SAC Recreation Mitigation Strategy for the SAC is in preparation by the local planning authorities that propose housing growth in the vicinity of the SAC (Tewkesbury Borough Council, Cotswold District Council, Stroud District Council, Cheltenham Borough Council and Gloucester City Council), in collaboration with Natural England. Natural England has confirmed that the Recreation Mitigation Strategy for local housing growth will include reference to signage and interpretation boards (as part of a package of wider measures) but not their specific locations or number, because this will fall within the remit of the strategy's proposed Project Officer. The specific details of the signage/ interpretation boards to be provided by the scheme are proposed to be agreed with the Project Officer once they are in post. This is to ensure that the mitigation aligns with measures agreed as part of the emerging Recreation Mitigation Strategy for local housing growth.</p> <p>Natural England are the statutory body responsible for the conservation of the SAC and they have confirmed that provision of additional signage/ interpretation boards by the scheme is welcome. Once the relevant local planning authorities have finalised the Recreation Mitigation Strategy for the SAC relating to local housing growth, the specific locations of signage to be provided by National Highways in relation to the scheme will be agreed with Natural England and the relevant Project Officer. It is the Applicant's view that there are no practical hurdles to implementation of the mitigation. There is simply a need to collaborate with the emerging Recreation Mitigation Strategy for local housing growth to ensure that the scheme delivers mitigation that compliments the wider approach. It is understood that implementation of the local authorities' Recreation Mitigation Strategy will commence well in advance of anticipated operation of the scheme in 2026. If for any reason the Recreation Mitigation Strategy for local housing growth does not come forward, the measures to be provided by the scheme would be agreed unilaterally with Natural England.</p> <p>b) Question not directed at Applicant</p>
1.3.42	Applicant	<p>Loss of Tuffaceous Vegetation Explain and justify why the proposed compensation for the loss of Tufa habitat is sufficient and justified, or suggest/ provide proposed additional compensation.</p>	<p>As stated in Environmental Statement (ES) Chapter 8 Biodiversity (Document reference 6.2, APP-039), compensation is required in relation to the loss of feature G231 which is a tuffaceous formation that supports qualifying vegetation of the Annex 1 habitat H7220 Petrifying springs with tufa formation (Cratoneurion). This feature would be lost as a result of the realignment of the tributary of Norman's Brook, resulting in a permanent/irreversible damage that would negatively affect the integrity of the</p>

Number	Directed to	Question	Applicant's Response
			<p>resource. This habitat loss would represent a major adverse impact as a result the construction phase of the scheme, triggering the requirement for compensation, since the loss of an irreplaceable feature cannot be mitigated for.</p> <p>The compensation package comprises two parts:</p> <p>1) Onsite mitigation, whereby specific drainage solutions would be designed to maintain spring recharge into and flows within the realigned tributary of Norman's Brook. The drainage solution is required to support a consistent water chemistry (i.e. groundwater influenced) and freshwater ecology (i.e. springhead / headwater stream communities) in the realigned Norman's Brook. A groundwater drainage blanket would be used to transfer groundwater to the realigned Norman's Brook. Opportunities would specifically be sought to promote calcium carbonate precipitation in the realigned stream, and a focus for detailed design would be to ensure that groundwater transferred is discharged in the riparian zone, creating springhead habitat adjacent to the realigned channel where appropriate, where tufa could form if the conditions are suitable as mentioned above.</p> <p>Key to the design would be delivering the mineral-rich water to the riparian zone in a way that promotes precipitation; water velocity, water chemistry, shade levels and substrate (local stone) characteristics would be optimised for tufa precipitation based on current research.</p> <p>These onsite mitigation measures would be monitored against success criteria to be agreed with Natural England and the Environment Agency, with potential adaptive management options if criteria are not met. This monitoring is secured through commitment BD47 within the Environmental Statement (ES) Appendix 2.1 Environmental Management Plan (EMP) (Document Reference 6.4, APP-317).</p> <p>2) Offsite compensation would comprise of interventions at three locations in the vicinity of the scheme where opportunities for improvement and enhancement of existing tufa formations have been identified, i.e. degraded habitat which could be restored and enhanced by changing the land and/or habitat management to remove the cause of degradation. The area of compensation (three sites) roughly equates to three times the size of Feature G231 which will be lost.</p>

Number	Directed to	Question	Applicant's Response
			<p>These interventions would be monitored against success criteria to be agreed with Natural England and the Environment Agency, with potential adaptive management options if criteria are not met. This monitoring is secured through commitment BD9 within the ES Appendix 2.1 EMP (Document Reference 6.4, APP-317).</p> <p>This compensation package has been discussed and agreed in principle during a meeting on 23 November 2021 with the relevant statutory organisations, Natural England and the Environment Agency, as recorded in the Statement of Common Ground with Natural England in Annex C and with the Environment Agency in Annex B of the Statement of Commonality (Document Reference 7.3, APP-419).</p> <p>With the implementation of the above mitigation and compensation, and considering the monitoring and management commitments, the proposals are sufficient and justified.</p>
1.4 Compulsory Acquisition, Temporary Possession and Other Land or Rights Considerations			
1.4.1	Applicant	<p>CA and TP Negotiations Provide an update of the current situation of negotiations with affected landowners and occupiers including over potential acquisition by agreement. Please complete Annex A with this information.</p>	<p>In accordance with the Examination Timetable, National Highways has prepared and submitted the Compulsory Acquisition Schedule (Document Reference 8.9) alongside this response to Responses to the Examining Authority's Written Questions (ExQ1) (Document Reference 8.4) at Deadline 1.</p> <p>This Schedule has incorporated the table set out within Annex A of the ExQ1 (PD-008) as requested and we would direct the Examining Authority to the Compulsory Acquisition Schedule for the detail requested.</p>
1.4.2	Applicant	<p>Highways England Land a) With reference to the Book of Reference paragraph 2.1.5 and the Lands Plans, if the existing A417 is within the ownership of Highways England and the responsibility for maintaining the road falls to them, why is there a need to show it as being land acquired permanently?</p>	<p>a) This is standard practice where existing highway land is included within a road improvement scheme, to ensure that any restrictions that there may be on National Highways' existing landownership can be acquired if necessary, to deliver the nationally significant infrastructure project. All such known restrictions are included within the Book of Reference (Document Reference 4.3, APP-026).</p> <p>There are many examples of where this approach has been applied previously, including the recent A30 Chiverton to Carland Cross Development Consent Order 2020.</p> <p>b) National Highways can confirm that there is no cost / value attributed to land already in the ownership of National Highways. This land is included so that any minor</p>

Number	Directed to	Question	Applicant's Response
		b) How does this affect the calculation of funds available for compulsory acquisition?	restrictions, limitations, or unknown and unregistered interests can be acquired and compensated for as required. This is often referred to as "cleansing" title to land necessary for such a project, and is common practice. That the land to be cleansed is not reflected in any land cost estimates, except to acknowledge that the land forms part of the scheme, reflects the Applicant's (reasonable) assessment of the likelihood of any compensatable interests emerging following the exercise of any compulsory acquisition powers, should they be made.
1.4.3	Applicant	Book of Reference (BoR) In part 5 of the BoR [APP-026] plots 3/1n, 3/9b, 3/11b and 3/12 – 3/12f are identified as 'Special Category land – Open'. Can you confirm if this is a typographical error and should read 'Special Category Land – Open Space' and amend the BoR?	National Highways can confirm that the text identified is a typographical error and should read 'Special Category Land – Open Space' as suggested. The Book of Reference (Document Reference 4.3, APP-026) will be updated accordingly, and National Highways proposes to submit an updated version into the Examination at a future examination deadline.
1.4.4	Applicant	Book of Reference No reason or detailed description is given with regards to plot 2/33. When updating the BoR, please provide this.	National Highways acknowledges the missing description within Part 1 of the Book of Reference (Document Reference 4.3, APP-026). This plot forms part of the unnamed minor access road trackway (U50852) which is hedgerow-lined and located to the north-east of Birdlip Radio Station and north-west of Rushwood Kennels. All interests and rights in this land are required for the scheme. The Book of Reference will be updated with a description and submitted into the Examination at a future examination deadline.
1.4.5	Applicant	Statement of Reasons In the Statement of Reasons [APP-024], should Table 2 refer only to the acquisition of rights since the temporary possession of land is set out within Table 3?	The table titles within Appendix A of the Statement of Reasons (Document Reference 4.1, APP-024) are consistent with the legend on the Land Plans (Document Reference 2.2 (Rev 1), AS-036). The title of Table 2 is correct as it is detailing land required temporarily during construction with permanent rights also required. This, for example, includes land required to construct utilities infrastructure, with rights subsequently required for ongoing maintenance of the apparatus. Table 3 details land which is only required temporarily during the construction of the scheme, and in respect of which no rights are required.

Number	Directed to	Question	Applicant's Response
1.4.6	Applicant	<p>Statement of Reasons With regards to paragraphs 6.2.4, 6.2.7, 6.2.14, 6.2.18, 6.2.21, 6.2.24 and 6.2.25 of the Statement of Reasons [APP-024], give an update as to latest negotiations.</p>	An update on all land to be acquired is provided in the Compulsory Acquisition Schedule (Document Reference 8.9), which has been submitted at Deadline 1 alongside this response to Written Questions (PD-008).
1.4.7	Applicant	<p>Statement of Reasons</p> <p>a) To confirm the statement in 7.5.39 of the Statement of Reasons [APP-024], all 10,540 square metres of 'replacement land' to be registered as common is land owned by Highways England?</p> <p>a) b) Does this figure include the 1,771 square metres of land temporarily possessed, or is this a separate figure (i.e. is the 1,771m² restored common land in addition to or part of the 10,540-replacement land)?</p>	<p>a) National Highways can confirm that all land identified as Replacement Common Land within the Statement of Reasons (Document Reference 4.1, APP-024) is currently in the ownership of National Highways. This includes Plots 2/1n, 2/1q, 2/1r, 3/1p and 3/1s.</p> <p>b) The 1,771m² of land identified for temporary possession does not form part of the 10,540m² of Replacement Common Land. The land to be temporarily possessed is to be used solely as a working width to facilitate the construction of boundary features on adjacent land which is not Common Land. No works are proposed on the area of Common Land and once the temporary possession ceases, the land will be available to the owner (Gloucestershire Wildlife Trust), commoners and the public.</p>
1.4.9	Applicant	<p>Statement of Reasons</p> <p>a) In the Statement of Reasons [APP-024] section 6.6 addresses duties under the Equality Act 2010 and states the Applicant has complied with its duties under section 149 and it goes on to note the Applicant has conducted an Equality Impact Assessment explaining how. Given the comments from the National Star Foundation [RR-039 and RR-078] can you confirm whether residents and users of National Star premises</p>	<p>a) The residents and users of National Star College (NSC) have been considered as required under the Equality Act 2010 within the submitted Equality Impact Assessment (EqIA) (Document Reference 7.8, APP-424).</p> <p>National Highways used their 'Equality, Diversity and Inclusion sifting Tool (EDIT)' to complete the EqIA. The EDIT tool has been designed to make evidence-based and informed decisions about infrastructure projects, supporting the appropriate consideration of equality, diversion and inclusion issues in project design and development. The EDIT tool has been an accepted means of assessment on other Nationally Significant Infrastructure Projects (NSIPs).</p> <p>b) The EqIA documents the identification, review and assessment of NSC for the purposes of the duties under the Equality Act 2010. The EqIA details that the National Highways project team are in regular conversation with NSC to ensure that the scheme considers the needs of the residents and users of NSC from design to</p>

Number	Directed to	Question	Applicant's Response
		<p>and services were taken into account?</p> <p>b) If so, identify where and how within the documentation this is the case.</p> <p>c) If not please provide an updated Equality Impact Assessment to include specific reference to the users of these services and how account has been taken.</p>	<p>operation. A comprehensive programme of engagement has been completed with NSC throughout the preparation of the DCO and engagement has continued into Examination. It has been confirmed to NSC that a National Highways appointed liaison will be in place throughout the lifetime of the scheme.</p> <p>The EqIA identified that during construction there would be increased noise levels which could temporarily cause disruption to NSC. The students at NSC with protected characteristics (specifically physical and learning disabilities such as autistic spectrum disorder) may be more sensitive to noise than the wider population. Students at NSC undertake both classroom and non-classroom-based learning activities meaning certain noise mitigation practices will not be appropriate in all instances. NSC has a residential facility, meaning any night-time construction work may impact upon students' sleep, resulting in fatigue and a lack of concentration.</p> <p>The EqIA details that the scheme is approximately 850m from the main buildings of the NSC site. Best practice and specific means of noise mitigation would be employed throughout construction to ensure noise pollution impacts are reduced as much as possible. This includes the installation of mechanical ventilation in particularly noise sensitive rooms at NSC so that windows can be closed if construction noise is intrusive. Further noise mitigation would be developed in collaboration with NSC to help address their concerns. A commitment to construction noise mitigation provisions specific to NSC has been included in the Environmental Statement (ES) Appendix 2.1 Environmental Management Plan (EMP) (Document Reference 6.4, APP-317).</p> <p>The EqIA outlines that the construction works may cause disruption access to NSC. NSC have raised concerns about ongoing and unimpeded access throughout the scheme construction. National Highways will adopt good practice measures used widely on highway schemes to ensure the safe and timely access to organisations with specific needs is maintained. The detailed Construction Traffic Management Plan to be updated as part of the EMP (construction stage) will be reviewed in consultation with all relevant parties.</p> <p>National Highways has explained to NSC that the appointment of a construction contractor is ongoing. When a construction contractor is formally appointed, a meeting would be arranged to discuss the construction traffic concerns. An action</p>

Number	Directed to	Question	Applicant's Response
			<p>has been included in the EqIA for a clear plan of access to community bodies (including NSC) to be presented to relevant facilities impacted throughout the construction period. A commitment to ongoing access throughout the scheme construction will be included in an updated EMP (Document Reference 6.4, APP-317) at Deadline 2 of the Examination. The EqIA outlines that during operation of the scheme, a positive impact would be created at NSC with woodland planting; used to integrate the attenuation basins at Ullenwood junction, being located within the grounds of NSC. This would help to screen the new junction from sensitive users of the College and create additional woodland on NSC's land. Further detail about the woodland planting proposed can be found in ES Figure 7.11 Environmental Masterplan Sheet 7 (Document Reference 6.3, APP-174).</p> <p>NSC have raised concerns that they have not been considered to the level required under the Equality Act 2010. National Highways appreciates NSC's concerns but is confident that the EqIA demonstrates that groups with protected characteristics have been considered to the levels required. National Highways continues to actively engage with NSC to discuss their concerns about the EqIA and other wider issues about the scheme.</p>
1.4.10	Applicant	<p>Public and Private Interest Balance The Statement of Reasons [APP-024] states that there is a compelling case in the public interest for the CA. a) Set out what assessment, if any, has been made of the effect upon individual APs and their private loss that would result from the exercise of CA powers in each case. b) Demonstrate within the application that the public benefits of the Proposed Development outweigh any residual adverse effects including private loss suffered by individual landowners and occupiers.</p>	<p>a) Section 5.4 of the Statement of Reasons (Document Reference 4.1, APP-024) sets out that National Highways is satisfied that the conditions in section 122 of the Planning Act 2008 (the Act) are met and that tests within the Compulsory Acquisition Guidance are satisfied, and there is a compelling case in the public interest for the Compulsory Acquisition identified as necessary to deliver the scheme.</p> <p>All of the land subject to compulsory acquisition and temporary possession is necessary to construct, operate, maintain and mitigate the scheme and National Highways believes that the extent of land sought is proportionate and reasonable.</p> <p>Landowners whose land is compulsorily acquired are entitled to compensation under the Compensation Code, as incorporated into the dDCO. A first principle of the Compensation Code is the principle of equivalence - that landowners are, as far as possible, to be placed in a position equivalent to that which they would have been had the compulsory purchase of their land not occurred. The land cost estimate undertaken as part of the scheme development is undertaken for each landowner / affected person and considers severance and injurious affection. Any</p>

Number	Directed to	Question	Applicant's Response
		<p>c) Demonstrate how such a conclusion has been reached and how the balancing exercise between public benefit and private loss has been carried out.</p> <p>d) Explain how it is demonstrated that interference with human rights in this case would be proportionate and justified.</p> <p>e) Explain how the proportionality test has been undertaken and explain how this approach has been undertaken in relation to individual plots.</p>	<p>residual private loss suffered by landowners is therefore likely to be limited, albeit National Highways recognises that interfering with private property rights (and associated human rights) is not a matter to be approached lightly.</p> <p>b) National Highways has had regard to the requirement in section 122(3) of the Act and the factors which evidence the compelling case where public benefit derived from the compulsory acquisition outweigh the private loss of those whose land is affected. This is demonstrated within the following application documents:</p> <ul style="list-style-type: none"> • Case for the Scheme (Document Reference 7.1, APP-417) • Statement of Reasons (Document Reference 4.1, APP-024) • Funding Statement (Document Reference 4.3, APP-025) <p>The National Policy Statement for National Networks (NPSNN), in paragraph 2.10, outlines that the Government has concluded that at a strategic level there is a compelling need for development on the national networks – both as individual networks and as an integrated system. It goes on to say that the Examining Authority and the Secretary of State should therefore start their assessment of applications for infrastructure covered by the NPSNN on that basis.</p> <p>c) The documents referred to in response to question (b) above demonstrate also demonstrate how the conclusions that there is a compelling case in the public interest has been reached, and how the balancing exercise has been carried out.</p> <p>d) The documents referred to in response to question (b) demonstrate that interference with human rights would be proportionate and justified. The need for and benefits of the scheme are set out within the Statement of Reasons (Document Reference 4.1, APP-024) and in other submission documents including the Case for the Scheme (Document Reference 7.1, APP-417). Together, they demonstrate that there is a very strong and compelling case in the public interest for the scheme to be delivered.</p> <p>The land identified as being required for the scheme has been based on environmental and engineering requirements and is the minimum necessary to construct, maintain and mitigate the scheme. The purpose for which each plot of land is required is set out within Appendix A of the Statement of Reasons (Document Reference 4.1, APP-024).</p>

Number	Directed to	Question	Applicant's Response
			<p>e) During scheme development, each plot has been reviewed individually in order to challenge the proposed land take and allow refinement where possible to reduce land required. This plot-by-plot review included consideration of:</p> <ul style="list-style-type: none"> • The requirement for land take and extent to which the plot was required. This included design alterations in consultation with affected persons to ensure that only land necessary for the scheme was included within the Order limits, and wherever possible, the scheme allowed for the continued use of wider land holdings. • Review of the land use and ownership of land in order to consider the impacts of including that land within the scheme, both in terms of ownership and any business impacts. • Review of areas and amendments to ensure, wherever possible, land take follows existing boundaries / ownerships. • Efforts to reduce severance and design changes to ensure no inaccessible or unworkable areas of land exist post construction of the scheme. <p>As a result of the above proportionality tests and review / challenge process which balanced the requirement for individual plots against the anticipated impacts, National Highways is satisfied that the powers of compulsory acquisition and possession sought through the draft Development Consent Order (DCO) are necessary, proportionate, and justified.</p>
1.4.11	Applicant	<p>Alternatives to Acquisition Could the Applicant please provide direction to the evidence that demonstrates that all of the 'reasonable alternatives to acquisition' have been explored?</p>	<p>Before a decision was made to proceed with the Scheme, National Highways explored and assessed many alternative solutions and routes. These are described in Section 2.2 of the Case for the Scheme (Document Reference 7.1, APP-417), and the Environmental Statement (ES), Chapter 3 (Document Reference 6.2, APP-034). The Scheme, which is the subject of the current application, has evolved through consultations, negotiation and discussion with a range of Interested Parties and Affected Persons. Please refer to the National Highways response to ExQ 1.1.6 which sets out how the full range of alternatives has been considered.</p> <p>The Statement of Reasons (Document Reference 4.1, APP-024), section 5.5 explains that following public consultation, the Applicant selected the most appropriate option. This selection took into account various factors, including, amongst others, views of consultees including persons with an interest in land. Other factors included environmental impacts, meeting the objectives of the Scheme, affordability, value-for-</p>

Number	Directed to	Question	Applicant's Response
			<p>money, safety and construction and operational considerations. None of the alternatives or modifications considered would obviate the need for the compulsory acquisition and temporary possession of land. The Applicant has been undertaking negotiations to acquire land and rights by agreement. This process is explained in the Statement of Reasons (Document Reference 4.1, APP-024), in paragraphs 5.7.1 to 5.7.2. The current situation in respect of those negotiations is detailed in the Applicant's Compulsory Acquisition Schedule in Annex A which will be updated for deadline 1.</p> <p>The draft Development Consent Order (dDCO) (Document Reference 3.1, APP-022), Article 32 (Acquisition of subsoil or airspace only), facilitates the Applicant's ability to be flexible in order to minimise, so far as is possible, the extent of interests to be acquired, with less impact upon landowners. The Explanatory Memorandum (Document Reference 3.2, APP-023), in paragraph 4.121 explains that it is considered to be in the public interest to provide this flexibility. In addition, the dDCO, Article 27 (Compulsory acquisition of rights and restrictive covenants), allows for rights over land to be acquired as well as (or instead of) the land itself. This would allow the Applicant, if appropriate, to reduce the area of outright acquisition and rely on the creation and acquisition of new rights instead, as explained in the Explanatory Memorandum (Document Reference 3.2, APP-023), paragraph 4.98.</p>
1.4.12	Applicant	<p>Funding Paragraph 2.1 of the Funding Statement [APP-025] sets out the composite parts that contribute to the estimated capital cost of £439.6million. The paragraph refers to compensation payments but does not explicitly state there is an allowance of funds for blight, which appears a reasonable prospect since section 4 of the Funding Statement states some claims have already been successful. Can the Applicant confirm the amount of funds set aside for anticipated blight claims?</p>	<p>Paragraph 2.1 of the Funding Statement (Document Reference 4.2, APP-025) states that the most likely estimate of the scheme is £439.6 million. This includes the cost of land acquisition, including an allowance for blight claims.</p>
1.4.13	Applicant	<p>Funding</p>	<p>a) The Government has committed to funding the projects included within Road Investment Strategy 2 (RIS2), including this scheme, as confirmed within section 3</p>

Number	Directed to	Question	Applicant's Response
		<p>a) With reference to the Funding Statement [APP-025] and paragraph 2.2.12 of the Case for the Scheme [APP-417], this project is only one of those projects confirmed within the second Road Investment Strategy. In terms of the funding available to this scheme, what proportion of the funds within that strategy are ring-fenced for this project and what contingencies are there if the budget were to increase?</p> <p>b) Would this prejudice the delivery of other projects through reducing the amount of available funds?</p> <p>c) Has allowance been made for inflation in the cost estimate for the project and, if so, what is it?</p> <p>d) The UK has been subjected to a significant and costly pandemic and the ExA requires confirmation that the stated £27.5bn for road improvements remains available.</p>	<p>of the Funding Statement (Document Reference 4.2, APP-025). The scheme does not have a ring-fenced budget within the funding available for RIS2. The cost estimate for the scheme includes allowances for risk, as a contingency. The 'Statement of funds available' at page 119 of RIS2 also confirms that the funding available for RIS2 overall includes "a risk reserve which will act as a flexible pot, allowing Highways England (now National Highways) to respond to unexpected events without putting the delivery of its programme at risk". National Highways also has a Central Risk Reserve which can be accessed for contingency funding where portfolio level risks materialise.</p> <p>b) The estimated cost of the scheme has been prepared in accordance with National Highways procedures and the HM Treasury Green Book, and includes the land acquisition, compensation costs and claims associated with the scheme, legal fees, and land agent fees. In the event that the actual cost of the scheme exceeds the estimated cost, the additional funds required would be drawn from the RIS2 risk reserve. The Government has committed to funding all of the projects within RIS2. An increase in the funding required for this scheme would not prejudice the delivery of other RIS2 projects.</p> <p>c) Paragraph 2.1.1 of the Funding Statement (APP-025) confirms that allowances for risk and inflation have been included within the cost estimate for the scheme.</p> <p>d) The Government has committed to funding all of the projects within RIS2, including this scheme, as confirmed in the recent Autumn Budget and Spending Review 2021 published on 27 October 2021.</p>
1.4.14	Applicant	<p>Funding</p> <p>a) It is stated in paragraph 2.2.12 of the Case for the Scheme [APP-417] that an upper limit of cost range (£500 million) was set. At what stage was this budget set in the optioneering process and how much influence did that</p>	<p>a) The cost range estimate for the scheme was confirmed by the Department for Transport in Autumn 2017, as detailed at paragraph 6.4.1 of the Technical Appraisal Report (Document Reference 7.9, APP-425). The scheme was developed using National Highways' Project Control Framework (PCF) process. Estimated costs and value for money were considered as part of the PCF process leading up to a preferred option for progression to PCF Stage 3 (Preliminary Design) being identified in March 2019 (the Preferred Route Announcement). ES Chapter 3 Assessment of alternatives (Document Reference 6.2, APP-034) includes details of the timeline and activities undertaken at each stage of the PCF process.</p>

Number	Directed to	Question	Applicant's Response
		<p>have on the study of alternatives?</p> <p>b) How was the upper limit of cost set, and what were the factors contributing to the setting of the limit?</p>	<p>b) The cost range for the scheme is an estimate and not a limited budget. The cost range was confirmed following early stage cost estimating, and indicated the likely range of funds required to deliver a solution that met the scheme objectives. Factors that were taken into account included value for money and affordability within the wider Road Infrastructure Strategy portfolio.</p>
1.4.15	Applicant	<p>Funding</p> <p>a) In terms of funding, what proportion of the money has been specifically set aside to deal with blight claims and compensation claims, and are the costs likely to rise?</p> <p>b) It is also noted from table 7-1 of the Statement of Commonality [APP-419] that utility diversions are agreed with various statutory undertakers and incorporated in the costs. What proportion of the money has been set aside for this and is there potential for these costs to rise?</p>	<p>a) The estimated cost of the land acquisition required for the scheme, including compensation costs and blight claims associated with the scheme, is included in the most likely estimate. These allowances have been prepared in accordance with National Highways procedures and the HM Treasury Green Book, by qualified land agents and is considered to be an accurate estimate.</p> <p>b) The utility diversions required in order to facilitate the scheme form part of the authorised development. All costs associated with utility diversions are included within the estimated cost of constructing the scheme. No additional utility diversions are anticipated.</p>
1.4.16	Applicant	<p>Air Balloon – Loss of Accommodation</p> <p>With regards the Air Balloon Public House, what discussions are in place to compensate the loss of the dwelling (on-site staff accommodation)?</p>	<p>The Air Balloon public house has been considered and assessed in ES Chapter 12 Population and Human Health (Document Reference 6.2, APP-043) as set out in its Table 12-14 Development land and businesses, as a business receptor.</p> <p>The staff accommodation is provided for the bar manager only and the public house is not considered to be a residential dwelling. Discussions in relation to the acquisition of the property have considered the premises as a whole. Greene King (the owner) has not objected to this approach and valuation discussions in relation to the property are due to commence shortly.</p>
1.4.17	Applicant	<p>Air Balloon – Alternatives</p> <p>Has any option of retaining but relocating the Air Balloon Public</p>	<p>As explained in the Consultation Report Appendices - Part 2 of 2 (Document Reference 5.2, APP-029) wherever possible, Highways England has worked to avoid the need to demolish property or businesses during scheme design, however the need to demolish</p>

Number	Directed to	Question	Applicant's Response
		House along the route of the proposed Air Balloon Way been considered?	<p>the Air Balloon pub is unavoidable. Whilst it is recognised that the Air Balloon public house is not a Listed Building, detailed historic building recording will be undertaken as part of the mitigation of the scheme. The consideration of the Air Balloon public house and its demolition is considered in Environmental Statement (ES) Chapter 6 Cultural Heritage (Document Reference 6.2, APP-037) and ES Chapter 12 Population and Health (Document Reference 6.2, APP-043).</p> <p>A replacement venue for the Air Balloon public house is not proposed as part of the scheme. This approach (including acquisition) has been discussed and is supported by Greene King (the owner)</p>
1.4.18	Applicant	<p>Compensation Claims Is there a need within the dDCO to contain an article guaranteeing that the availability of funds to pay compensation claims, to underpin the guarantee in the Funding Statement?</p>	<p>As a publicly funded statutory undertaker, National Highways does not consider there to be a need for an article guaranteeing the availability of funds to pay compensation claims within the draft Development Consent Order (dDCO) (Document Reference 3.1, APP-022). There is no precedent for such an article within previous National Highways transport orders.</p> <p>The land cost estimate completed for the scheme includes an estimate of potential compensation prepared in accordance with National Highways procedures and the HM Treasury Green Book by qualified land agents, as detailed in section 2 of the Funding Statement (Document Reference 4.2, APP-025).</p> <p>The Government has committed to funding the projects included within Road Investment Strategy 2 (RIS2), including this scheme. The Funding Statement (Document Reference 4.2, APP-025) outlines the funding commitment for the scheme through the Road Investment Strategy (RIS) 2, including the "Statement of Funds Available", as well as a commitment from Government which collectively demonstrates that the scheme would be fully funded by the Department for Transport and is not dependant on funding contributions from other parties. The Statement also outlines National Highways responsibility for delivering major projects contained within the RIS as a government owned company, providing further reassurance that the Applicant would have the funding to underpin the scheme, including compensation.</p>
1.4.19	Applicant	<p>Statutory Undertakers The Book of Reference includes a number of statutory undertakers with interests in land. Provide a progress</p>	<p>An update on discussions with Statutory Undertakers is provided as part of the updated Statement of Commonality (Document Reference 7.3, APP-419) which is submitted at Deadline 1 alongside this response to Written Questions.</p>

Number	Directed to	Question	Applicant's Response
		<p>report on negotiations with each of the statutory undertakers listed, with an estimate of timescale for securing agreement from them and, if necessary, state whether there are any envisaged impediments to the securing of such agreements. This can cross refer to the Statements of Common Ground requested by the ExA.</p>	<p>In Summary:</p> <p>Western Power Distribution – National Highways and Western Power Distribution have provisionally reached agreement in principle on the terms of the dDCO and its application to any WPD apparatus affected by the project, including the application of the protective provisions (see Schedule 8, part 1 of the dDCO) as they relate to that apparatus. That agreement however remains provisional at this stage, and the parties will update the ExA of any future change in that position.</p> <p>Severn Trent Water – National Highways have provided to Severn Trent Water a suggested approach to the protection of their apparatus through the protective provisions of the dDCO (see Schedule 8, part 1 of the dDCO). We await confirmation from Severn Trent Water that the position is agreed.</p> <p>BT/Openreach and Gigaclear – Despite multiple attempts to engage with BT/Openreach and Gigaclear in relation to the draft protective provisions within the draft DCO (Document Reference 3.1, APP-022), there has been no response. National Highways therefore assumes that these statutory undertakers are content to rely on the standard provisions as set out in the draft DCO.</p> <p>Cellnex – Following a request for a Statement of Common Ground with Cellnex, this has been drafted and is included as Appendix I to the updated Statement of Commonality (Document Reference 7.3 Rev 1).</p>
1.4.21	Applicant	<p>Other Consents Since submission of the application, what progress has been made on obtaining the other necessary consents, licences or permits that are necessary for the Proposed Development?</p>	<p>Since submission of the Consents and Agreements Position Statement (Document Reference 7.2, APP-418), National Highways has continued to engage with the relevant organisations where the draft Development Consent Order (dDCO) (Document Reference 3.1, APP-022) is seeking to disapply legislation. These discussions have been positive, and we are awaiting further feedback and confirmation that the relevant bodies are in agreement before updating the Consents and Agreements Position Statement. In summary:</p> <p>Environment Agency – Discussions are continuing with the Environment Agency and further information was recently shared by National Highways in order to provide further context.</p>

Number	Directed to	Question	Applicant's Response
			<p>Natural England – Discussions are continuing in relation to disapplication of Section 28E and Section 28H of the Wildlife and Countryside Act 1981. These discussions are taking place at a national level between National Highways and Natural England in order to ensure consistency across projects.</p> <p>On behalf of the Joint Councils, Gloucestershire County Council (GCC) – Discussions are ongoing with GCC in relation to Ordinary Watercourse Land Drainage Consent under section 23 of the Land Drainage Act 1991.</p> <p>In addition, and specifically in relation to protected species licensing, National Highways has now received the letters of no impediment referenced in the Consents and Agreements Position Statement (Document Reference 7.2, APP-418) and these have been submitted into the Examination at Deadline 1 (see Document Reference 8.7).</p>
1.4.23	Applicant, Gloucestershire Wildlife Trust	<p>Replacement Common Land Paragraph 12.10.41 in reference to the replacement common land repurposed from the A417 states it is to be planted as Calcareous Grassland Habitat, in co-ordination with Gloucestershire Wildlife Trust, who would become owner of the replacement land. Is there a written agreement or obligation to this effect and, if so, can it be provided?</p>	<p>Article 39(1) of the draft Development Consent Order (dDCO) (Document Reference 3.1, APP-022) ensures that National Highways must submit a satisfactory scheme for the provision of the replacement common land to the Secretary of State for certification before it can take possession of the common land. Article 39(4) confirms that the replacement common land is to vest in the person(s) in whom the common land was vested immediately before it was vested in the undertaker on the date that the replacement common land is laid out and provided in accordance with the certified scheme.</p> <p>Commitment PH4 within the Environmental Statement (ES) Appendix 2.1 Environmental Management Plan (EMP) (Document Reference 6.4, APP-317) provides that the replacement common land will be provided as shown on the Special Category Land Plans (Document reference 2.3, APP-007). The commitments within the ES are secured under Requirement 3 of the dDCO.</p> <p>National Highways proposes to lay out the replacement common land as calcareous grassland further to discussions with Gloucestershire Wildlife Trust (GWT) and as part of wider proposals to provide ecological connectivity between the Barrow Wake SSSI Unit and the proposed Gloucestershire Way Crossing. These proposals are described in section 5.3 of the ES Appendix 2.1 EMP Annex D Landscape and Ecological Management Plan (Document Reference 6.4, APP-321) and shown on sheets 6, 8 and 9 of ES Figure 7.11 Environmental Masterplan (Document Reference 6.3, APP-173, APP-175 and APP-176).</p>

Number	Directed to	Question	Applicant's Response
			GWT's support for these proposals is captured within the updated Statement of Common Ground submitted at Deadline 1 in Appendix F of the Statement of Commonality (Document Reference 7.3 (Rev 1)).
1.4.24	Applicant	<p>Affected Businesses Can the Applicant explain if Crickley Hill Tractors would be relocated? And if so, where would this be?</p>	<p>As part of land negotiations, a blight application was made by the landowner of Crickley Hill Tractors and accepted by National Highways. The landowner has now found an alternative location and the business of Crickley Hill Tractors will be relocated as part of this move.</p> <p>A final moving date is currently being agreed between National Highways and the business owner. Arrangements are being made to relocate the business and establish new buildings and appropriate planning permission for continuation of the business at the new location.</p>
1.5 Draft Development Consent Order (DCO) [APP-022]			
1.5.1	Applicant	<p>General Ensure, if amended versions of the DCO are submitted as the Examination progresses, that all internal references and legislative footnotes are checked and updated.</p>	National Highways notes the Examining Authority's instructions and will comply with them when submitting amended versions of the draft Development Consent Order (dDCO) (Document Reference 3.1, APP-022).
1.5.2	Applicant	<p>Interpretation Should the definition of "the Undertaker" be amended to take account of the rebranding of Highways England to National Highways?</p>	The definition of "the Undertaker" within the draft Development Consent Order (dDCO) (Document Reference 3.1, APP-022) has been amended to reflect this change. A revised dDCO has been submitted to support this response to written questions (Document Reference 3.1 (Rev 1)).
1.5.3	Applicant, GCC, TBC, CDC, CCB	<p>Interpretation d) Is the Applicant satisfied that the definition of 'maintain' is consistent with other Development Consent orders?</p>	The definition of "maintain" within the draft Development Consent Order (dDCO) (Document Reference 3.1, APP-022) has been included within recently made National Highways orders. It is exactly the same as in the Lake Lothing Third Crossing Development Consent Order 2020 and substantially the same as in the A19 Downhill Lane Junction Development Consent Order 2021.

Number	Directed to	Question	Applicant's Response
			<p>The Applicant considers that the scope of this power is justified. The maintenance provisions supplement the maintenance powers under the Highways Act 1980 and ensure that the Applicant has the necessary powers to maintain the authorised development as part of the strategic road network. It is vital for the proper operation of the scheme (and the safety and convenience of its users) that the Applicant is able to repair the highway and maintain it to the standards required by prevailing best practice, potentially many decades hence.</p> <p>Any such works of maintenance must be within the bounds of what is authorised to be constructed under the Order, and within the scope of Article 8 (limits of deviation), as well as the measures secured within the EMP (end of construction stage) under Requirement 3.</p> <p>The Environmental Statement has regard to the implications of the definition of maintain within the envelope of activities it considered and the assessment was undertaken on this basis. This is referenced in ES Chapter 2 The Project (Document Reference 6.2, APP-033) where paragraph 2.10.4 states “Maintenance activities would be as authorised under the DCO. As required by the EMP, industry standard control measures would be applied and encapsulated in the third iteration of the EMP, the EMP (end of construction stage). With the implementation of these measures no significant effects are considered likely.”</p>
1.5.4	Applicant	<p>Interpretation Would it be appropriate to define ‘adjacent’ within the dDCO by a physical dimension (distance) away from the route of the preliminary design?</p>	<p>It would be difficult to specify a precise distance from the Order limits for the purposes of Article 5(2). In practice, the extent of ‘adjacent’ land would need to be judged on a case by case basis in the context of what is necessary for the construction and operation of the authorised development, so is not likely to extend a great distance beyond the Order limits.</p> <p>One example of where activity may take place on ‘adjacent’ land under the dDCO, thereby potentially engaging the provisions of this article, is in Article 23, which gives the Applicant authority to enter land for the purpose of carrying out surveys and investigations. For the purpose of Article 23, the term ‘adjacent’ would mean the land that was required to be surveyed because it would or might be affected by the authorised development. This area would be determined by the purpose of or need for the surveys. For example, ecological surveys would need to include the appropriate habitat for the species of interest rather than being limited to a pre-determined distance.</p>

Number	Directed to	Question	Applicant's Response
			<p>It is important to recognise that Article 5(2) does not of itself confer powers on the undertaker to carry out any works on 'adjacent' land. It simply clarifies the relationship between the Order and other legislation. It would therefore be an arbitrary and largely unnecessary exercise to try and specify the limits of the term 'adjacent' in Article 5(2).</p> <p>The current drafting of Article 5(2) has been accepted in many other made orders, including:</p> <ul style="list-style-type: none"> • A1 Birtley to Coal House Development Consent Order 2021 • A19 Downhill Lane Junction Development Consent Order 2020 • M42 Junction 6 Development Consent Order 2020 • A585 Windy Harbour to Skippool Highway Development Consent Order 2020 • A63 (Castle Street Improvement, Hull) Development Consent Order 2020 • A30 Chiverton to Carland Cross Development Consent Order 2020
1.5.5	Applicant, consenting Authorities	<p>Article 3</p> <p>a) Confirm whether consent has been given in accordance with section 150 of the PA2008 for the disapplication of the consent provisions in 3(a),(b),(c),(d),(i)?</p> <p>b) If not, which provisions need to be removed and why?</p>	<p>a) The Environment Agency has not confirmed its position on consent for the disapplication of the consent provisions in Article 3(a), (b), (c), (d) of the dDCO. Discussions are progressing positively, but National Highways await a formal response from the Environment Agency (see also response to Question 1.4.21).</p> <p>In respect of Article 3(i) - Section 80 (notice to local authority of intended demolition) of the Building Act 1984 is not a prescribed consent for the purposes of s.150 of the PA2008, and therefore no consent is required for the disapplication of this provision under Article 3(i) of the dDCO.</p> <p>b) There is no need to remove provisions from Article 3 because, where consent has not yet been provided for the disapplication of a prescribed consent under s.150 of the PA2008, engagement with the relevant regulatory body is ongoing and that consent is expected to be forthcoming during the examination.</p>
1.5.6	Applicant	<p>Article 3</p> <p>Can the Applicant respond to concerns regarding the disapplication of section 28E of the Wildlife and Countryside Act 1981, Article 3(h) of the dDCO and the impact of not having this provision on</p>	<p>The Consents and Agreements Position Statement (Document Reference 7.2, APP-418) sets out how consent is being sought to carry out works within a SSSI under the dDCO. Consent for works within the Crickley Hill and Barrow Wake SSSI would ordinarily be required under the Wildlife and Countryside Act 1981. Discussions with Natural England are ongoing in relation to the application of sections 28E, 28G and 28H of the Act.</p>

Number	Directed to	Question	Applicant's Response
		the implementation of the Proposed Development?	The Applicant notes that there are two recent examples of made orders which included the disapplication of s.28E; the A14 Cambridge to Huntingdon Improvement Scheme and the A303 Stonehenge (Amesbury to Berwick Down) Scheme.
1.5.7	Applicant	<p>Article 4 Explain the position of Article 4 within the dDCO and comment on whether it would be better placed in the 'Principal Powers' part of the proposed Order.</p>	<p>Part 1 (Preliminary) of the dDCO is considered to be the appropriate part for Article 4 because it regulates the position between the Order and existing responsibilities for maintenance of drainage works. It is therefore a preliminary matter, rather than a provision that confers powers on the undertaker.</p> <p>The position of Article 4 within the dDCO is consistent with the approach taken in other recently made National Highways orders, including the A30 Chiverton to Carland Cross Development Consent Order 2020.</p> <p>However, if the ExA remains of the view that Article 4 would be better placed in Part 2 Principal Powers of the dDCO, that change can be made when a further iteration of the dDCO is submitted to the examination. The Applicant would welcome the ExA's direction in that regard.</p>
1.5.8	Applicant	<p>Planning Permission Provide commentary on the relationship between dDCO Article 7 and s153 of the PA2008, and whether the wording as drafted obviates the need to formally change the DCO in the future.</p>	<p>The purpose of Article 7 is to ensure that the implementation of any future planning permission granted for separate development that is not a nationally significant infrastructure project, or part of one, or required to facilitate the authorised development, would not breach the terms of the Order.</p> <p>Article 7 is not aimed at managing any future changes to the development which would be authorised by the dDCO. It does not therefore obviate the need to formally change the DCO in accordance with s.153 and Schedule 6 to the PA2008, should a future change to the authorised development be required.</p> <p>The same or very similar wording as Article 7 has been accepted in other recently made orders, including:</p> <ul style="list-style-type: none"> • The A1 Birtley to Coal House Development Consent Order 2021 • M42 Junction 6 Development Consent Order 2020 • The A30 Chiverton to Carland Cross Development Consent Order 2020
1.5.9	Applicant	Article 8	a) The provision of limit of deviation between points E and F of up to a maximum of 5.3m would enable flexibility in the design of Cold Slad Lane and adjacent design

Number	Directed to	Question	Applicant's Response
		<p>a) What is the rationale behind allowing the limit of deviation between points E and F to be a maximum of 5.3 metres (as detailed in Article 8(iii) in the dDCO)?</p> <p>b) Under Article 8, for what reason would a maximum limit of deviation need to be exceeded?</p> <p>c) The article contains a further element of flexibility whereby the maximum limits may be exceeded if the SoS considers that to do so would not give rise to any materially new or materially different effects. Is this extra level of flexibility necessary and if so can you justify?</p> <p>d) d) What process is in place for the SoS to consider and determine matters that arise under this provision? For example, should schedule 2 part 2 apply?</p>	<p>elements. Design changes within this limit of deviation would fall within the existing highway boundary. Flexibility is essential to enable the detailed design of the scheme to respond to ground conditions which will only be discovered when works begin, to enable design to deliver greater value for money through the value engineering process, and to allow for more refined designs that deliver better environmental outcomes. Potential benefits in this location could include reducing earthworks side slope gradients between Cold Slad Lane and the proposed A417 mainline by increasing the separation distance between the two carriageways.</p> <p>b) The limits of deviation for the scheme have been prepared with reference to the maximum area of land anticipated to be required for each element of the authorised development. It is possible that the prescribed limits of deviation may need to be exceeded in exceptional circumstances. It is for that reason that the proviso which appears at the end of Article 8 would enable those limits to be exceeded under the certification of the Secretary of State, following consultation with the relevant planning authority and local highway authority. This only applies within the Order limits - in no circumstances could the scheme extend beyond the Order limits.</p> <p>The tailpiece to Article 8 appears in a similar form in a number of other recently made orders, including for example the A30 Chiverton to Carland Cross Development Consent Order 2020.</p> <p>c) The ability to exceed the prescribed limits of deviation is important to ensure that the undertaker can respond appropriately to constraints and opportunities identified during the detailed design process, ensuring always that deviation in excess of the prescribed limits would not give rise to any materially new or materially worse adverse environmental effects in comparison with those reported in the environmental statement. This flexibility is therefore necessary and justified in order to ensure the efficient delivery of a nationally significant project.</p> <p>d) Schedule 2 Part 2 of the dDCO would apply in practice, as any approved departure from the maximum limits of deviation in carrying out the authorised development would need to be reflected in the plans to be approved under Requirement 11 in accordance with Schedule 2 Part 2.</p>
1.5.10	Applicant	Article 10	<p>a) The companies listed under Article 10(5) are those statutory undertakers with apparatus within the Order limits that is required to be diverted under specific works</p>

Number	Directed to	Question	Applicant's Response
		<p>a) Why is the Secretary of State's consent not required to transfer the benefit of the Order to those companies listed under Article 10(5) of the dDCO?</p> <p>b) Why are other utility or service providers not included in these exemptions?</p>	<p>forming part of authorised development. This article would allow the undertaker to transfer to those companies the powers required to carry out those works themselves. In some cases, statutory undertakers will prescribe that certain works can only be carried out by them, for example electricity distributors often do not allow other parties to effect the connections to their networks for safety reasons. The statutory undertakers accordingly require to be able to carry out certain parts of the works under this Order. The Secretary of State's consent would not be required to transfer the benefit of the Order to those companies because the transfer would only apply to licensed statutory undertakers acting in that capacity and undertaking works to their own apparatus. This is a standard approach and similar drafting can be found, for example, at Article 10 of the A30 Chiverton to Carland Cross Development Consent Order 2020.</p> <p>b) There are no other known utility or service providers with apparatus within the Order limits that is required to be diverted.</p>
1.5.11	Applicant	<p>Articles 14 and 18</p> <p>a) Would a breach of Article 14(5) and Article 18 be a conviction offence and an offending individual charged under the terms of this Order?</p> <p>b) If a person were to speed, what effect does this provision have, if any, and is there recourse against the Applicant?</p>	<p>a) The effect of Articles 14 and 18 is to apply existing statutory provisions (in these cases speed limits, and clearways) to the authorised development, as permitted by s.120(5) of the Planning Act 2008. The DCO imposes the speed limit which applies in the same manner as if it had been imposed by order under section 14 of the 1984. Article 14(9) also makes it clear that these limits can be amended by future orders under the 1984 Act. This simply prevent the needs to make separate speed limit orders in addition to the DCO in order to bring the authorised development into use. This accords with the legislative intention of the Planning Act by reducing the number of other processes needed to deliver NSIP projects by including them in the DCO.</p> <p>The dDCO is not an instrument under which offences committed in contravention of those statutory provision would be prosecuted. That would fall to take place under the existing regimes affecting such matters; which in the case of Articles 14 and 18 would be enforced by the police under the Road Traffic Regulation Act 1984. S89(1) states "A person who drives a motor vehicle on a road at a speed exceeding a limit imposed by or under any enactment to which this section applies shall be guilty of an offence."</p> <p>Similarly, the proposed restrictions sought under Article 18 are to the same as those which would apply to a clearway established under section 2 of the 1984 Act.</p>

Number	Directed to	Question	Applicant's Response
			<p>This provides that a traffic regulation order (TRO) may make provision prohibiting, restricting or regulating the use of a road, or any part of the width of a road, by vehicular traffic, or by vehicular traffic of any specified class either generally or subject to specified exceptions or determined in a manner provided for it or with reference to periods of time. A person who contravenes an order is guilty of an offence under section 5(1) of the 1984 Act and the sentencing for offences is prescribed by the Road Traffic Offenders Act 1988.</p> <p>There is no provision within the dDCO for recourse against the Applicant; nor is it considered appropriate that there should be.</p> <p>b) Please see explanation above in response to part (a).</p>
1.5.12	Applicant	<p>Article 15</p> <p>a) In the context of Article 15, is it correct to use the term 'temporarily stop up'?</p> <p>b) Are the purposes of the Article potentially better served by a Traffic Regulation Order enforcing a temporary road closure, since stopping up is meant to prohibit any form of public access?</p>	<p>a) Article 15 gives the undertaker the power to temporarily prevent the public from using any street for the purposes of carrying out the authorised development, subject to ensuring that essential pedestrian access to and from premises along that street is maintained (paragraph (3)). The term 'temporarily stop up' is commonly used within National Highways orders. The formulation of this article is heavily precedented in DCOs and was the language used in model provision 11 of the (now withdrawn) Infrastructure Planning (Model Provisions) (England and Wales) Order 2009. The Applicant suggests that it is preferable that the term is retained for consistency with precedent and as it is clear and understandable to those who may be affected by the exercise of the power.</p> <p>b) No, because Article 15 can be used to prohibit any form of public access, unless essential pedestrian access to and from premises that abut the street is needed. Requiring the Applicant to obtain separate Traffic Regulation Orders to authorise the construction activities associated with the authorised development would be an excessive administrative burden and entirely contrary to one of the objectives of the DCO regime to reduce the number of consent required to deliver NSIPs. Undertaking a TRO process would also duplicate much of the public consultation which has already occurred in respect of the scheme and create a risk of such an order not being granted timeously, delaying delivery of the scheme. Paragraphs 2.3.28 to 2.3.31 of Annex B Construction Traffic Management Plan (CTMP) of ES Appendix 2.1 EMP (Document Reference 6.4, APP-319) provides further detail of the additional notifications that would be carried out by the Applicant prior to any local closures under this Article.</p>

Number	Directed to	Question	Applicant's Response
1.5.13	Applicant	<p>Article 15</p> <p>a) Is the purpose and intention of Article 15 to extend beyond the period of construction for the Proposed Development?</p> <p>b) If so, what benefits does this article give the Applicant that would not be served by existing legislative powers?</p>	<p>a) Article 15 is based on Article 11 of the Infrastructure Planning (Model Provisions) (England and Wales) and Order 2009. Whilst no longer in force, the Examining Authority (ExA) will appreciate that many DCO provisions continue to be informed by practice emerging from the model provisions.</p> <p>The purpose and intention of Article 15 is to enable the temporary stopping up, alteration, diversion or restriction of use of any street for the purposes of carrying out the authorised development identified in Schedule 1 to the draft DCO (dDCO) (Document Reference 3.1, APP-022). Within the dDCO, “carrying out” is used synonymously with the term “construction”, and in contrast to the later maintenance of the authorised development. This is apparent for example in the drafting of the first sentence of Article 21 which refers to the “carrying out, maintenance, or use of the authorised development”. Article 15 could not be relied on following the completion of the construction of the authorised development.</p> <p>b) The answer to 1.5.13(a) is in the negative, and this question does not therefore apply.</p>
1.5.14	Applicant	<p>Article 15</p> <p>a) Subsection 1 permits the undertaker to stop up divert or restrict the use of any street, should this be limited to those within the order limits?</p> <p>b) and/or can the Applicant provide justification for such a wide power outside of the order limits?</p>	<p>a) No, the effect of Article 15(1) should not be limited to the order limits.</p> <p>Flexibility is required in Article 15(1) to ensure the undertaker is permitted to stop up divert or restrict the use of any street that may be required during the period of construction. This follows the approach established by Article 11 of the Model Provisions. Roads cannot be considered in isolation but as a network. It may be necessary to stop up a street outside the order limits to prevent creating dead ends with no turning facilities, or to restrict streets to one-way to address the consequences of stopping up elsewhere. To limit the application of this to within the order limits would inappropriately prevent the Applicant (which is a highway authority) from establishing the safest and most effective overall traffic management system on the highways connecting into and out of the order limits.</p> <p>Under Article 15(4) where National Highways is not the street authority, it must consult with and obtain the consent of the relevant street authority, which may also impose reasonable conditions on any such consent. That presents a sensible and proportionate safeguard on the exercise of the powers in question.</p>

Number	Directed to	Question	Applicant's Response
			<p>b) Subsections 120(3) and (4) and paragraph 17 of Part 1 of Schedule 5 to the Planning Act 2008 provide that particular provision may be made in a DCO for “the stopping up or diversion of highways”, without qualification. In addition to being based on the model provisions, the drafting of Article 15 is also used in the following made DCOs:</p> <ul style="list-style-type: none"> • The A63 (Castle Street Improvement, Hull) Development Consent Order 2020 • The A19 Downhill Lane Junction Development Consent Order 2020
1.5.16	Applicant	<p>Article 17 This appears to be a very wide power to enable the undertaker to form and lay out means of access or improve access at any location within the Order limits as the undertaker requires. Can the Applicant justify the need for power wider than that available under the Highways Act (Explanatory Memorandum [APP-023] paragraph 4.69) and can the Applicant identify whether there is any DCO precedent for this?</p>	<p>The inclusion of this article is appropriate as it will ensure that the authorised development can be carried out expeditiously by allowing National Highways to create new temporary accesses as and where required.</p> <p>Temporary accesses will be required from the public highway to the construction compounds shown on the General Arrangement Plans (Document Reference 2.6a, APP-010). The precise location of these accesses cannot be confirmed until the detailed design stage.</p> <p>Annex B Construction Traffic Management Plan (CTMP) of ES Appendix 2.1 EMP (Document Reference 6.4, APP-319) sets out proposals for construction traffic management including phasing plans and control measures for temporary accesses. This plan will be refined in consultation with the relevant planning authority and approved by the Secretary of State as part of the EMP (construction stage) under Requirement 3. Requirement 3(3) ensures that the authorised development must be constructed in accordance with the approved Construction Traffic Management Plan.</p> <p>Article 17 appears in the same form in the following DCOs:</p> <ul style="list-style-type: none"> • A1 Birtley to Coal House Development Consent Order 2021 • A19 Downhill Lane Junction Development Consent Order 2021 • M42 Junction 6 Development Consent Order 2020 • A585 Windy Harbour to Skipool Development Consent Order 2020 • The A63 (Castle Street Improvement, Hull) Development Consent Order 2020 • The A30 Chiverton to Carland Cross Development Consent Order 2020
1.5.17	Applicant	<p>Article 20</p>	<p>The Cotswold Way is a local distance route, now known as a national trail, designated under the National Parks and Access to the Countryside Act 1949 (the 1949 Act). This</p>

Number	Directed to	Question	Applicant's Response
		<p>Can the Applicant please explain the need for and purpose of this article and provide legal submissions regarding the need for its inclusion in the DCO and the legislative basis upon which it is permissible? In doing so please also explain how this is intended to interact with the process in the National Parks and Access to the Countryside Act 1949 and the power of the Secretary of State to issue a direction under s.55 of that Act.</p> <p>Additionally, in relation to the specific drafting, can the Applicant explain why the definition of the "Cotswold Way, national trail" and the "Cotswold Way national trail diversion" been included in the article itself but the "Cotswold Way national trail diversion report" is instead defined in article 2?</p>	<p>designation is separate and supplementary to any underlying public rights of way that exist along the route. A modification to a national trail may only be undertaken in accordance with the 1949 Act, in addition to any amendments to public rights of way required to facilitate the modification.</p> <p>Article 20 is required to record the exercise by the Secretary of State for Transport of their powers under section 55(2) of the 1949 Act to divert the Cotswold Way national trail. The ExA will appreciate that the Cotswold Way National Trail Diversion Report (Document Reference 7.11, APP-427) contains further background about the statutory regime controlling modifications to national trails, and the measures that the Applicant intends to rely on to minimise temporary disturbance. That Report has been consulted on with key stakeholders, including Natural England, prior to submission of the Application. The purpose of Article 20 is to ensure that the new route is laid out in accordance with the Report, which would be a certified DCO document, and to confirm the date on which the diversion would take effect. Article 20 does not circumvent the process under the 1949 Act and simply facilitates a direction by the Secretary of State to divert the national trail pursuant to section 55(2) as part of the Order. This mechanism has been agreed with Natural England.</p> <p>The "Cotswold Way national trail diversion report" is a defined term used in multiple places within the dDCO, including Article 20 and Schedule 9 (Documents to be certified). The terms "Cotswold Way national trail" and "Cotswold Way national trail diversion" are only used within Article 20. Those definitions are therefore only relevant to Article 20 and have been located within the article itself instead of Article 2.</p>
1.5.18	Applicant	<p>Article 20</p> <p>a) Is there a need for a similar article to article 20 for amendments to the route and condition of the Gloucestershire Way footpath?</p> <p>b) If not, why not?</p>	<p>a) No, there is not.</p> <p>b) The Gloucestershire Way is a long distance footpath. A long distance footpath is not a formal designation. The footpaths that make up the Gloucestershire Way will be diverted under the dDCO as public rights of way pursuant to Article 16 and Part 2 (Highways to be stopped up for which a substitute is to be provided and new highways which are otherwise to be provided) of Schedule 4, in accordance with Annex F Public Rights of Way Management Plan (PRoW) of ES Appendix 2.1 EMP (Document Reference 6.4, APP-323).</p>
1.5.19	Applicant	<p>Article 22</p>	<p>Yes, where a development consent order is required listed building consent is not required to be obtained (s.33 PA 2008). This article was included within the model</p>

Number	Directed to	Question	Applicant's Response
		<p>Does Article 22 obviate the need to obtain listed building consent if such protective works are to be carried out to a listed building?</p>	<p>provisions and is standard drafting. No protective works to listed buildings are anticipated as part of the scheme at present.</p> <p>The wording has been included in the following DCOs:</p> <ul style="list-style-type: none"> • The A1 Birtley to Coal House Development Consent Order 2021 • The A30 Chiverton to Carland Cross Development Consent Order 2020 • The A19 Downhill Lane Junction Development Consent Order 2020 • The M42 Junction 6 Development Consent Order 2020 • The A585 Windy Harbour to Skippool Highway Development 2020 <p>Work undertaken to date has identified two properties, Crickley Hill Farm and Shab Hill Barn, that may require protective works. However, both of these are 50m away from the DCO boundary and are not expected to require heritage-specific protective works. Both these buildings are in active use, and it is expected that measures employed to protect this use during construction will also safeguard the structures themselves.</p> <p>The Applicant notes that the provision is drafted for the protection of third-party property. In addition, Article 22(6) states that the owner or occupier can serve counter notice to question whether it is necessary to carry out the protective works. There are, further, provisions relating to compensation ensuring that any works can be done expeditiously and without prejudicing a landowner's rights.</p>
1.5.20	Applicant	<p>Article 29 Subsection 1 states that all private rights over land subject to CA under the order are extinguished. However, subsection 2 seeks to distinguish land over which the CA is limited to the acquisition of rights and in those cases limit the power to extinguish private rights to where their continuance would be inconsistent with the exercise of the right or burden of the restrictive covenant. Should 29(1) be amended to make it clear that it applies only to the compulsory acquisition of land and</p>	<p>No, because Article 29(1) is subject to the rest of the provisions within Article 29. It is clear from the drafting of paragraph (2) that where rights over land or restrictive covenants are acquired compulsorily that all private rights in that land are extinguished so far as their continuance would be inconsistent with the exercise of the right or burden of the restrictive covenant. As acquisition of rights or imposition of covenants is separately dealt with in (2), paragraph (1) can only ever apply to land. Article 29(1) already expressly only applies where land itself is acquired by virtue of the drafting that only takes effect on the date of acquisition or date of entry under the 1965 Act which can only apply where an acquisition process is followed.</p> <p>The drafting of Article 29 is consistent with other National Highways made orders, including:</p> <ul style="list-style-type: none"> • A1 Birtley to Coal House Development Consent Order 2021 • A19 Downhill Lane Junction Development Consent Order 2021 • M42 Junction 6 Development Consent Order 2020

Number	Directed to	Question	Applicant's Response
		not the compulsory acquisition of rights over land?	<ul style="list-style-type: none"> • A585 Windy Harbour to Skippool Development Consent Order 2020 • The A63 (Castle Street Improvement, Hull) Development Consent Order 2020 • The A30 Chiverton to Carland Cross Development Consent Order 2020
1.5.21		<p>Restoration With reference to Article 34(4) and 35(6):</p> <p>a) Should there be notification given to the relevant landowner or local planning authority confirming the land restoration works are completed and, if so, how would such notice be served?</p> <p>b) Should a new requirement be added (or a new management plan appended to the EMP [APP-317]) setting out measures and actions for effective land restoration?</p>	<p>a) The land restoration works required pursuant to Article 34(4) and 35(6) must be completed 'to the reasonable satisfaction of the owners of the land'. The undertaker would therefore need to communicate with the owners of the land on completion of the restoration works to comply with that requirement.</p> <p>b) No, Articles 34 and 35 already include detailed requirements in relation to the temporary use of land, including restoration, and are based on the model provisions. In addition, there are existing controls within the Environmental Management Plan of ES Appendix 2.1 (Document Reference 6.4, APP-317) in relation to the restoration of land taken on a temporary basis where appropriate. For example, agricultural land taken on a temporary basis would be restored and returned to the landowner for unrestricted agricultural use in the same agricultural condition (ALC grade) that currently exists (Ref GS13 in Table 3-2 Register of environmental actions and commitments).</p>
1.5.22		<p>Article 39</p> <p>a) Does the Applicant intend to submit the scheme for the provision of the common land to the examination and if not, why not?</p> <p>b) If this is not to be provided during the Examination what is the Applicant's intended process for the submission and approval of the scheme for replacement land in 39(1), including consultation, and should this be set out within the Article to provide clarity?</p>	<p>a) No, the intention is for the undertaker to submit the scheme for the provision of the common land post-consent, for the reasons explained in response to part b) of this Question below.</p> <p>b) As explained in response to Question 1.4.23 above, Article 39(1) of the draft Development Consent Order (dDCO) (Document Reference 3.1, APP-022) ensures that National Highways must submit a satisfactory scheme for the provision of the replacement common land to the Secretary of State for certification before it can take possession of the common land. Article 39(4) confirms that the replacement common land is to vest in the person(s) in whom the common land was vested immediately before it was vested in the undertaker on the date that the replacement common land is laid out and provided in accordance with the certified scheme.</p> <p>Commitment PH4 within the Environmental Statement (ES) Appendix 2.1 Environmental Management Plan (EMP) (Document Reference 6.4, APP-317) provides that the replacement common land will be provided as shown on the Special Category Land Plans (Document reference 2.3 [APP-007]). The commitments within the ES are secured under Requirement 3 of the dDCO.</p>

Number	Directed to	Question	Applicant's Response
			<p>National Highways proposes to lay out the replacement common land as calcareous grassland further to discussions with Gloucestershire Wildlife Trust (GWT) and as part of wider proposals to provide ecological connectivity between the Barrow Wake SSSI Unit and the proposed Gloucestershire Way Crossing. These proposals are described in section 5.3 of the ES Appendix 2.1 EMP Annex D Landscape and Ecological Management Plan (Document Reference 6.4, APP-321) and shown on sheets 6, 8 and 9 of ES Figure 7.11 Environmental Masterplan (Document Reference 6.3, APP-173, APP-175 and APP-176).</p> <p>GWT's support for these proposals is captured within the updated Statement of Common Ground submitted at Deadline 1 in Appendix F of the Statement of Commonality (Document Reference 7.3 Rev 1).</p>
1.5.23		<p>Article 40</p> <p>a) There is a cross referencing error in Article 40(2).</p> <p>b) How would the Applicant demonstrate that any decisions undertaken under the term of "it reasonably believes to be necessary" has been based upon a fair, impartial and expert-advised approach as opposed to an arbitrary decision by the contractor?</p> <p>c) Under Article 40, is compensation to be calculated using the CAVAT regime?</p> <p>d) Why is there no commitment to undertaking replacement planting of a similar species and scale of the tree or shrub being lost?</p>	<p>a) The Applicant notes the cross referencing error, which has been corrected. A revised draft Development Consent Order (dDCO) (Document Reference 3.1 (Rev 1)) has been submitted to support this response to written questions.</p> <p>b) Decisions in relation to the felling or lopping of trees or shrubs during construction would need to be taken in accordance with the Environmental Management Plan (EMP) (construction stage). The outline EMP (Document Reference 6.4, APP-317) provides for an Arboricultural Method Statement and an updated Tree Protection Plan to be prepared by the contractor following an Arboricultural Impact Assessment, with responsibility for ensuring that the elements of the EMP related to tree works are complied with during construction being given to an arboricultural specialist. The Tree Protection Plan of ES Appendix 7.6 Arboricultural Impact Assessment (Document Reference 6.4, APP-353) would be updated prior to construction in accordance with L13 in Table 3-2 and draft DCO Requirement 5 (Document Reference 3.1, APP-022). This plan must follow requirements described in guidance for British Standard 5837:2012.</p> <p>Decisions in relation to the felling or lopping of trees or shrubs during operation would need to be taken in accordance with the Environmental Management Plan (EMP) (end of construction stage). The Secretary of State has ultimate approval of the EMP iterations and management plans, as confirmed in Table 2-1 of the EMP. The EMP (construction stage) and EMP (end of construction stage) must be submitted to and approved by the Secretary of State under Requirement 3, and the</p>

Number	Directed to	Question	Applicant's Response
			<p>authorised development must be constructed and operated in accordance with those plans.</p> <p>c) No, it is not.</p> <p>Part 2, Section 5 of the Land Compensation Act 1961 sets the rules for assessing compensation in respect of compulsorily acquired land. The principles set out in the Land Compensation Act 1961, together with the Compulsory Purchase Act 1965, the Land Compensation Act 1973, the Planning and Compulsory Purchase Act 1991 and the Planning and Compulsory Purchase Act 2004, are known as the "Compensation Code". The Compensation Code is used to calculate compensation to landowners whose land is compulsorily acquired.</p> <p>Section 125 of the Planning Act 2008 applies the Compensation Code to compulsory acquisitions under Development Consent Orders. Article 40(4) of the dDCO provides that compensation, in the event of dispute under this Article, will be determined under Part 1 of the Land Compensation Act 1961.</p> <p>d) Article 40 is required in case any tree or shrub is considered to obstruct the scheme or endanger anyone using it. Its primary focus is enabling the operation of the authorised development, rather than its construction. It is not possible to identify all trees and shrubs that may be required to be removed or pruned over the lifetime of the scheme. It is therefore not possible for National Highways to commit to undertaking replacement planting where the location, species and scale of trees or shrubs that could potentially be lost are unknown. The requirement to pay compensation for any loss or damage caused is considered to be an appropriate and proportionate measure, bearing in mind that the Article 40 power can only be used in specific circumstances.</p>
1.5.24		<p>Article 41</p> <p>a) Explain why Article 41 (removal of human remains) appears in Part 6 of the draft Development Consent Order as opposed to within Part 7.</p>	<p>a) Part 6 makes provision for operations undertaken during the construction, operation or maintenance of the authorised development. It is therefore appropriate for Article 41 (removal of human remains) to be placed in that part, as it covers what the undertaker must do where carrying our works will or may disturb any human remains.</p> <p>b) The Applicant does not consider that it is necessary to move Article 41 to Part 7 (miscellaneous and general).</p>

Number	Directed to	Question	Applicant's Response
		b) To reflect other made transport orders, should article 41 be a miscellaneous provision?	
1.5.25		<p>Article 48 Under article 48 is it appropriate that the Secretary of State is not excluded from arbitration proceedings?</p>	This article was included in the model provisions as Article 42 and is standard drafting. The purpose of the article is to ensure that any disagreements between parties are resolved expeditiously. Given the significance of the Secretary of State's responsibilities under the order, it is appropriate for the Secretary of State to be covered by this provision so as not to prevent the delivery of a nationally significant infrastructure project.
1.5.26		<p>Schedule 1 a) Within Schedule 1, does the Applicant consider there is any necessary/ unnecessary duplication or repetition of individuals works? b) For example, is Work No.4 as described repeated in Work No.4(d) and (i) and is Work No.8 repeated as Work No.8(b)?</p>	<p>a) The works are drafted so as to detail the individual components that make up each work number. There is therefore some repetition within Schedule 1. The Applicant considers that this is necessary in order to describe the component parts of work number, and for these to be easily identifiable on the works plans. This approach follows the conventional drafting of these schedules in National Highways DCOs. b) Yes, for the reasons explained above.</p>
1.5.27	Applicant	<p>Schedule 3 a) Part 7 of Schedule 3 to the dDCO contains [X] to denote the date of when an Order comes into effect. What is the progress on the related Order? b) Should there be additional entries in Part 7 to reflect the revocation of clearways on the A436, as well as on the A417, with additional points added to sheet 2 of the Traffic Regulations Measures Clearways and Prohibitions Plans [APP-013]?</p>	<p>a) Confirmation on this matter is being sought from GCC. Once received this information will be provided as part of a future deadline. b) It is agreed that additional points need to be added to Sheet 2 of Traffic Regulations Measures Clearways and Prohibitions (Document Reference 2.7b, APP-013) to split the revocation of clearways on the A417 and a short section of the A436. The updated version will be issued at a future deadline. An additional entry will be added to Part 7 of the draft Development Consent Order (Document Reference 3.1, APP-022) accordingly and included within the next iteration of the dDCO.</p>
1.5.28	Applicant	<p>Schedule 4 The Cotswold Way National Trail and the Gloucestershire Way footpath do</p>	Yes. The Cotswold Way National Trail will be formally diverted under the dDCO by way of Article 20. The public rights of way underlying the Cotswold Way National Trail and

Number	Directed to	Question	Applicant's Response
		not feature in the tables within Schedule 4 to the dDCO. Is there a reason for this?	forming part of the Gloucestershire Way long distance footpath are featured within Schedule 4 to the dDCO. Please also refer to the Applicant's response to Q1.5.7 which provides further detail.
1.5.29	Applicant	<p>Schedule 4</p> <p>a) Within Schedule 4, are there any roads that are subject to only temporary closures and therefore not subject to stopping up orders?</p> <p>b) If so, do they need a separate Part within this Schedule?</p>	<p>a) No, there are no roads within Schedule 4 that are subject to only temporary closures. Parts 1, 2, and 3 of Schedule 1 identify roads to be permanently stopped up.</p> <p>b) No, Article 15 provides for the temporary stopping up of streets subject to conditions. It is not possible to identify the streets that may be required to be stopped up at this stage. As such, a separate Part within Schedule 4 for temporary closures is not required. Additional management measures for the closure of public rights of way are secured by way of Annex F Public Rights of Way Management Plan (PRoW) of ES Appendix 2.1 EMP (Document Reference 6.4, APP-323) to be approved under Requirement 3.</p>
1.5.30	Applicant	<p>Schedule 8</p> <p>Regarding Part 3 of Schedule 4 in respect of 'Cowley Civil Parish', should the comments in column (2) be expanded to include reference to the rights of way and access plan as per the comment above it, so as to read 'Reference h Access to fields north west of new A417 mainline as shown on sheet 2 of the Rights of Way and Access Plan'?</p>	A reference to the rights of way and access plans has been added to the second row of the table at Part 3 of Schedule 4 to the draft Development Consent Order (dDCO) (Document Reference 3.1, APP-022).
1.5.31	Applicant	<p>Schedule 8</p> <p>Explain the current positions with regard to each of the protective provisions in Schedule 8 of the dDCO and whether any unresolved disagreements remain.</p>	The protective provisions for electricity, gas, water, and sewerage undertakers in Part 1 and for operators of the electronic communications code networks in Part 2 are on standard terms for National Highways DCOs. The Applicant is not aware that any concerns about the provisions in Part 1 or Part 2 have been raised by affected statutory undertakers.

Number	Directed to	Question	Applicant's Response										
			Discussions between the Applicant and the Environment Agency in relation to the protective provisions for the Environment Agency in Part 3 are at an early stage. The Applicant anticipates that the drafting will be agreed during the examination.										
1.5.32	Applicant	<p>Schedule 9 Should the 'Design Summary Report' be a certified document as this is a 'design led scheme' and to ensure it is given appropriate prominence in any future decisions?</p>	<p>The Design Summary Report (Document Reference 7.7, APP-423) summarises the work that has been undertaken to date to design a landscape-led scheme. It is intended to assist the ExA, SoS, stakeholders and the public by explaining the design rationale and how the scheme has been influenced by its landscape objectives. Whilst the Applicant considers that this document will be helpful to the ExA in examining, and the SoS in determining, the application, the Design Summary Report would not be relevant to any future decisions. As such, it should not be a certified document.</p> <p>National Highways has committed to the features of the Design Summary Report in ES Appendix 2.1 EMP (Document Reference 6.4, APP-317). The main features include, but not limited to, the following:</p> <table border="1"> <thead> <tr> <th>Design Summary Report feature</th> <th>ES Appendix 2.1 EMP (Document Reference 6.4, APP-317) commitment reference</th> </tr> </thead> <tbody> <tr> <td>Cotswold Way crossing</td> <td>L6, L21, BD53</td> </tr> <tr> <td>Gloucestershire Way crossing</td> <td>L7, L8, L21, BD39, BD41, BD44, BD53, BD54</td> </tr> <tr> <td>Cowley and Stockwell overbridges</td> <td>L9, L21, L26, BD39, BD41, BD44, BD55, BD56</td> </tr> <tr> <td>Re-purposed A417</td> <td>L10, BD49, BD53</td> </tr> </tbody> </table>	Design Summary Report feature	ES Appendix 2.1 EMP (Document Reference 6.4, APP-317) commitment reference	Cotswold Way crossing	L6, L21, BD53	Gloucestershire Way crossing	L7, L8, L21, BD39, BD41, BD44, BD53, BD54	Cowley and Stockwell overbridges	L9, L21, L26, BD39, BD41, BD44, BD55, BD56	Re-purposed A417	L10, BD49, BD53
Design Summary Report feature	ES Appendix 2.1 EMP (Document Reference 6.4, APP-317) commitment reference												
Cotswold Way crossing	L6, L21, BD53												
Gloucestershire Way crossing	L7, L8, L21, BD39, BD41, BD44, BD53, BD54												
Cowley and Stockwell overbridges	L9, L21, L26, BD39, BD41, BD44, BD55, BD56												
Re-purposed A417	L10, BD49, BD53												
1.5.33	Applicant	<p>Explanatory Memorandum For completeness, include an explanation of the purpose and effect of Schedules 3 to 9 of the dDCO within the Explanatory Memorandum.</p>	<p>The Applicant would respectfully suggest that it is not necessary to update the Explanatory Memorandum (APP-023) for completeness, in the manner in which the ExA has suggested.</p> <p>Schedules 3 to 9 of the dDCO (Document Reference 3.1, APP-022) include technical information which gives effect to various Articles within the dDCO. To the extent necessary, those Schedules are explained within the Explanatory Memorandum where those Articles are addressed. By way of example, paragraphs 4.47 to 4.54 introduce each of the 8 Parts of Schedule 3. It is suggested that to repeat the provisions at the</p>										

Number	Directed to	Question	Applicant's Response
			<p>end of the document would be unnecessary duplication, which is not in accordance with drafting conventions for explanatory memoranda.</p> <p>Examples of other explanatory memoranda which follow the approach taken in the existing A417 Explanatory Memorandum (APP-023) include:</p> <ul style="list-style-type: none"> • A1 Birtley to Coal House Development Consent Order 2021 • A19 Downhill Lane Junction Development Consent Order 2020 • M42 Junction 6 Development Consent Order 2020 • The A63 (Castle Street Improvement, Hull) Development Consent Order 2020.
1.5.34	Applicant, GCC, TBC, CDC	<p>Requirements – General</p> <p>a) Many of the requirements state that “no part” of the development is to commence until... Can the Applicant clarify what “a part” might be and whether this should be defined somewhere?</p> <p>b) In the absence of any explanation, it seems to the ExA that the development could be commenced in many different “parts” and that these “parts” could vary from requirement to requirement. This could generate uncertainty about what is approved. Can the LPAs also comment on the acceptability of this?</p>	<p>a) The Applicant does not consider that ‘part’ needs to be defined in the draft Development Consent Order (dDCO) (Document Reference 3.1, APP-022). The requirements are drafted such that, where an obligation is required to be discharged prior to commencement, the undertaker has the flexibility to discharge that obligation in stages. This is intended to avoid unnecessary delays to the delivery of the scheme. In this context, ‘part’ means any part of the scheme as identified by the Applicant in an application to discharge a requirement. In practice, parts of the scheme would be identified with reference to the relevant work numbers. It is not necessary to specify what ‘part’ means in this context. To do so would be unnecessarily restrictive.</p> <p>b) The reference to ‘parts’ of the scheme within the requirements reflects standard practice for the drafting of development consent orders. The Applicant has not found this to be an issue in practice.</p>
1.5.35	Applicant	<p>Requirement 3</p> <p>Natural England have suggested that 3(1) is amended to require consultation with NE before approval by the Secretary of State (see [RR-080]). How would this affect the implementation of the Proposed Development?</p>	<p>Natural England will be consulted on the content of the Environmental Management Plan (EMP) (construction stage) (Document Reference 6.4, Appendix 2.1, APP-317) and engaged with during construction where relevant as set out in the EMP (design stage) to be certified under Article 46. For example, see measures BD9 and BS63. The details of protected species licencing mitigation would also be agreed with Natural England and documented through the licencing process. Including Natural England as a prescribed consultee on the entire EMP (construction stage) would therefore be</p>

Number	Directed to	Question	Applicant's Response
			unnecessary and has the potential to delay implementation and the delivery of a nationally significant infrastructure project.
1.5.37	Applicant	<p>Requirement 3 The ExA is concerned with the wording “substantially in accordance”. “Substantially” is an interpretive word which potentially allows significant departures from the Outline CEMP and thus the ES to occur without examination. It is imprecise and not justified. Can the term ‘substantially’ be replaced with ‘must’?</p>	<p>The term “substantially in accordance” is appropriate in this context because it provides some limited flexibility for the content of the EMP (construction stage) and EMP (end of construction stage) to be updated further to the detailed design of the scheme. There is no risk of significant departures from the Environmental Statement as whole, because of Requirement 3(c), which provides that the EMP (construction stage) must incorporate the measures referred to in the ES. The Applicant considers that replacing the term “substantially” with “must” would be unnecessarily restrictive.</p> <p>The drafting of Requirement 3 is in accordance with recent National Highways orders including:</p> <ul style="list-style-type: none"> • A1 Birtley to Coal House Development Consent Order 2021 • A19 Downhill Lane Junction Development Consent Order 2020 • A585 Windy Harbour to Skippool Development Consent Order 2020 • The A63 (Castle Street Improvement, Hull) Development Consent Order 2020 • The A30 Chiverton to Carland Cross Development Consent Order 2020
1.5.38	Applicant	<p>Requirement 3 The requirement lists at (2)(e) list of management plans to be provided. A number of additional management plans are listed in measure GP5 within the EMP. Should these not also be listed in Requirement 3?</p>	<p>The list of management plans referred to at Requirement 3(3) is not an exhaustive list. There are additional management plans secured under Requirement 3 by way of the Environmental Management Plan (EMP) (design stage) (Document Reference 6.4, Appendix 2.1, APP-317) and the measures referred to within the Environmental Statement. However, the convention for National Highways orders is that those management plans of particular significance are referred to on the face of the requirements. The fact that the full set of management plans are not listed does not introduce any ambiguity as to what is required by way of management plans.</p>
1.5.39	Applicant	<p>Requirements 3 and 5 a) Would it be more practical and accessible to have a proportion of the management plans listed in Requirement 3(2)(e) separated out into standalone documents? b) For example, what would be the difference between the Landscape and Ecology</p>	<p>a) The management plans listed in Requirement 3(2)(e) would be prepared as standalone documents and appended to the EMP (construction stage).</p> <p>b) The difference between the LEMP and the environmental masterplan, on which the landscaping scheme is to be based, is explained in response to ExA Question 1.1.28 above. In summary, the environmental masterplan concerns what is to be delivered by the Applicant, whereas the LEMP controls how that is to be delivered. This is the same approach taken to the delivery of the highway elements of the authorised development; where what is to be delivered is controlled by Requirement</p>

Number	Directed to	Question	Applicant's Response
		<p>Management Plan (LEMP) submitted as part of the Environmental Management Plan in Requirement 3(2)(e), and the written landscaping scheme under Requirement 5?</p> <p>c) Could the LEMP cover all the factors in Requirement 5?</p>	<p>11, and how that is to be delivered controlled by the CEMP and other management plans under Requirement 3. It is suggested that this is a sensible allocation of responsibilities to the separate respective documents.</p> <p>c) The Applicant did not think it necessary to merge the separate functions of different control documents into a single document in the manner envisaged by this question. However, it has suggested additional drafting to a revised Requirement 6(2) within the dDCO submitted at Deadline 1 which would require the written landscaping scheme to be implemented in accordance with that requirement to be (expressly) in accordance with the LEMP. It is hoped that will address any residual concerns the ExA may have had.</p>
1.5.40	Applicant	<p>Requirement 4 In Requirement 4(3), what factors would govern the decision as where consultation is 'appropriate, reasonable and feasible'?</p>	<p>As noted in Requirement 4(3), relevant factors would include cost and engineering practicality. Other factors could be environmental impacts, land rights and access, the need for further consents or licences, and the scope of the undertaker's statutory duties and powers.</p>
1.5.41	Applicant	<p>Ambiguous Terminology The ExA is concerned with the wording "...or other recognised codes of good practice" in Requirement 6(2). These words are uncontrolled and raise numerous questions on what the definition of "recognised" and "good practice" means and the appropriateness of such measures in dealing with landscaping works. It is imprecise and not justified. Delete the tailpiece.</p>	<p>The drafting of this requirement reflects the fact that standards other than the British Standards could appropriately be applied, and that the landscaping works will need to be maintained for the life of the project, during which time industry standards could change. Further detail on the appropriate standards for the initial five-year period following completion of construction would be included within the EMP (end of construction stage), which must be approved under Requirement 3. The nature of ongoing maintenance must remain flexible so that appropriate responses can be made to any change in circumstances necessary to achieve the landscape design purposes.</p> <p>This wording is commonly used in National Highways orders and is not considered to raise issues of interpretation in practice. This article was included in the model provisions as requirement 8. Examples of its recent use include:</p> <ul style="list-style-type: none"> • Requirement 5(4) A1 Birtley to Coal House Development Consent Order 2021; • Requirement 5(4) A19 Downhill Lane Junction Development Consent Order 2020;

Number	Directed to	Question	Applicant's Response
			<ul style="list-style-type: none"> Requirement 5(4) A585 Windy Harbour to Skippool Highway Development Consent Order 2020; and Requirement 6(2) A30 Chiverton to Carland Cross Development Consent Order 2020
1.5.42	Applicant	<p>Requirement 9 Archaeological investigations and mitigations are excluded from the definition of “commence”. The ExA is concerned that such works could undermine the purpose of Schedule 2, Requirement 9 if such unregulated works had a detrimental effect on any potential archaeological remains discovered which the Requirement is seeking to protect. Justify why archaeological investigations are excluded from commencement works or otherwise explain how archaeological investigations would be regulated in the draft DCO.</p>	<p>Certain operations, including archaeological investigations, have been excluded from the definition of “commence” in Article 2(1). It is respectfully noted that archaeological mitigation is not specified as being an operation excluded from the definition of “commence”.</p> <p>Archaeological surveys have been undertaken to inform the dDCO (Document Reference 3.1, APP-022) and Environmental Statement Appendix 2.1 EMP Annex C Detailed Archaeological Mitigation Strategy and Overarching Written Schemes (Document Reference 6.4, APP-320). These surveys were designed in consultation with Historic England and Gloucestershire County Council. These bodies will have an approval role post- consent pursuant of requirement 9 of the draft DCO. This mitigation will comprise detailed archaeological investigations, to be undertaken prior to construction, and archaeological monitoring and recording during construction. Additionally, areas will be identified for protection and preservation during construction.</p> <p>The Applicant has given careful consideration to these works. Due to their nature it is not considered that these activities would have the potential for significant impacts.</p> <p>A narrative on the geophysical survey and trial trenching is recorded in the draft Statement of Common Ground with Historic England, in Appendix D of the Statement of Commonality (Document Reference 7.3, APP-419).</p>
1.5.43	Applicant	<p>Requirement 11 Explain how the details of the proposed crossings would be secured within the draft Development Consent Order.</p>	<p>The starting point is that the crossings included within the scheme must be designed in detail and carried out so that they are compatible with the preliminary scheme design shown on the works plans and the general arrangement plans (Requirement 11(1)).</p> <p>The detailed design of the crossings will also be subject to the measures and controls set out in the EMP (construction stage) pursuant to Requirement 3(4).</p> <p>Where the detailed design proposed is not compatible with the preliminary scheme design, details would need to be submitted to the SoS for approval following consultation with the relevant planning authority and local highway authority in</p>

Number	Directed to	Question	Applicant's Response
			<p>accordance with Requirement 11. Any amendments to the works plans and the general arrangement plans showing departures from the preliminary design would only be approved where they would not give rise to any materially new or materially worse adverse environmental effects in comparison with those reported in the environmental.</p>
1.5.44	Applicant	<p>Requirement 11 The Design Summary Report (APP-423) does not appear to be captured within those design documents listed in Requirement 11. Should it be?</p>	<p>The Design Summary Report summarises the work that has been undertaken to date to design a landscape-led scheme. It is intended to assist the ExA, SoS, stakeholders and the public by explaining the preliminary design rationale and how the scheme has been influenced by its landscape objectives. Whilst the Applicant considers that this document will be helpful to the ExA in examining, and the SoS in determining, the application, the Design Summary Report would not be relevant to any future decisions. As such, it should not be listed within Requirement 11. Please refer to National Highways response to 1.5.32 for more detail.</p>
1.5.45	Applicant	<p>Requirement 11 a) Requirement 11(1) says that the authorised development must be designed in detail and carried out “so that it is compatible with the preliminary design scheme...” This is imprecise and could generate uncertainty, leading to disputes over what “being compatible with” actually means. The Applicant should consider more certain and precise drafting. b) The article permits deviations from the detailed design plans, with consent of the SoS, for amendments that do not give rise to materially new or material different environmental effects. Are amendments to the key plans necessary and permissible and can the Applicant justify the need for this level of flexibility?</p>	<p>a) The scheme presented in the Works Plans (Document Reference 2.4 (Rev 1), AS-038) and Engineering Drawings and Sections (Document Reference 2.6b, APP-011) represents a reference design that must be developed into a detailed design following the grant of development consent.</p> <p>This requirement ensures that the Applicant delivers a scheme that is compatible with those plans, against a limit of deviation that permissively sets out the scope of what may or may not be delivered.</p> <p>The Applicant considers “compatible” to be the appropriate term and notes the SoS has endorsed this drafting in other DCOs such as the A30 Chiverton to Carland Cross Development Consent Order 2020 and M42 Junction 6 Development Consent Order 2020. The same need for flexibility is present in this scheme.</p> <p>b) The wording within Requirement 11 does not override the limits of deviation set by Article 8. Should the Applicant construct any part of the scheme outside of the limits of deviation without approval from the Secretary of State, it would be an enforceable breach of the Order, irrespective of “compatible” being used in the requirement.</p> <p>The preliminary scheme design presented for examination is sufficient for the purposes of carrying out the environmental assessment and will be developed into a detailed design once a contractor has been appointed. If the Applicant were to fix those details now it would unduly constrain its ability to deliver the scheme.</p>

Number	Directed to	Question	Applicant's Response
		c) What methods and means would be used to inform the public of scheme amendments, as indicated in Requirement 11(2)? d) Would there be notices, a period for their display and would there be any consultation on the amendments?	<p>Flexibility in the detailed design is essential to enable the design to respond to ground conditions which will only be discovered when works begin, to enable design to deliver greater value for money through the value engineering process, and to allow for more refined designs that deliver better environmental outcomes.</p> <p>c) Where amended details are approved by the Secretary of State under Requirement 11(1), National Highways would make those amended plans available on the scheme project page on its website. There is an option for members of the public to sign up for notification of updates to the project page via the website.</p> <p>d) Documents uploaded to the project page on National Highways' website would remain online for the life of the scheme. In addition, copies of the works plans, general arrangement plans, book of reference and environmental statement certified in accordance with article 46 (certification of plans etc.) will be available for inspection at National Highways' registered office. There are no requirements for notices in relation to the approval of detailed design under Requirement 11. However, consultation with the relevant planning authority and the local highway authority in respect of any departures from the preliminary design would be required under Requirement 11(1).</p>
1.5.46	Applicant	<p>Requirement 15</p> <p>a) In Requirement 15, which is the 'paragraph 4' referred in in 3(c) as there is no (4) in the requirement?</p> <p>b) Notwithstanding, is it appropriate to have a 'deemed consent' provision relating to undetermined applications by the Secretary of State? Can the Applicant demonstrate or justify how the ExA can be satisfied that the requirements secure the necessary mitigation, particularly anything EIA or habitats related, when there is a provision which</p>	<p>a) The reference to paragraph 4 in Requirement 15.3(c) is to paragraph 4 (details of consultation) of Schedule 2 to the draft Development Consent Order (dDCO) (Document Reference 3.1, APP-022) i.e. Requirement 4. The drafting convention in statutory instruments is that references to paragraphs within a DCO schedule should be made in those terms. In response this question, the Applicant has updated paragraphs 1, 4, 6 and 16 accordingly, as shown in the updated version of the dDCO submitted at Deadline 1.</p> <p>b) A deemed approval procedure has been included to ensure the expedient delivery of the scheme and is considered to be appropriate and justified in the context of a nationally significant infrastructure. A significant amount of information regarding the proposed mitigation for the scheme has already been submitted as part of the application and will be subject to detailed examination as part of the application process. The final details to be approved by the Secretary of State in discharging the requirements will be subject to consultation with prescribed consultees, as applicable. In the event that the Secretary of State is not satisfied that the details</p>

Number	Directed to	Question	Applicant's Response
		<p>could potentially mean that details get approved that do not in fact secure the mitigation?</p> <p>c) Is the period of 8 weeks consistent with other made Transport DCOs?</p>	<p>submitted in order to discharge a requirement secure any necessary mitigation, the Secretary of State can refuse the application within the 8 week determination period. Sub-paragraph (3) of Requirement 15 also ensures that the deemed approval mechanism will not apply where, in the view of a prescribed consultee, the subject matter of the application is likely to give rise to any materially new or materially worse environmental effects in comparison with those reported in the environmental statement as an additional safeguard. The same drafting has been used in the following made DCOs:</p> <ul style="list-style-type: none"> • A1 Birtley to Coal House Development Consent Order 2021 • A19 Downhill Lane Junction Development Consent Order 2020 • M42 Junction 6 Development Consent Order 2020 • A585 Windy Harbour to Skippool Development Consent Order 2020 • The A63 (Castle Street Improvement, Hull) Development Consent Order 2020 • A30 Chiverton to Carland Cross Development Consent Order 2020 <p>c) The period of 8 weeks is consistent with the above made transport orders.</p>
1.5.47	Applicant	<p>General Should the Wildlife and Countryside Act 1981 be referenced within the dDCO in more locations other than within Article 40?</p>	<p>The Applicant does not consider there is any other requirement to refer to the Wildlife and Countryside Act 1981 within the draft Development Consent Order (dDCO) (Document Reference 3.1, APP-022).</p>
1.5.49	Applicant	<p>Tailpieces The term 'reasonable satisfaction' is used frequently in the dDCO (for example, requirement 3(2)). Could more appropriate definitive wording be applied in each case?</p>	<p>The term "reasonable satisfaction" is used throughout existing Transport DCOs including:</p> <ul style="list-style-type: none"> • A1 Birtley to Coal House Development Consent Order 2021 • A19 Downhill Lane Junction Development Consent Order 2020 • M42 Junction 6 Development Consent Order 2020 • A585 Windy Harbour to Skippool Development Consent Order 2020 • The A63 (Castle Street Improvement, Hull) Development Consent Order 2020 • The A30 Chiverton to Carland Cross Development Consent Order 2020 <p>The Applicant considers that based on these precedents, use of that term is appropriate within the draft Development Consent Order (dDCO) (Document Reference 3.1, APP-022).</p>
<p>1.6 Geology and Soils</p>			

Number	Directed to	Question	Applicant's Response
1.6.1	Applicant, Environment Agency	<p>Hydrology</p> <p>a) With reference to paragraph 9.7.24 in ES Chapter 9 [APP-040], can any more certainty be given as to the relationship between the stream south of the Birdlip junction and the Churn valley?</p> <p>b) What conditions exist that makes its hydrological relationship difficult to ascertain?</p>	<p>a) The text erroneously refers to Birdlip junction instead of Birdlip Radio Station. An update to Environmental Statement - Updates and Errata (Document Reference 6.7, AS-051) will be provided at Deadline 2.</p> <p>The stream seasonally flows through a dry valley south of Shab Hill. It is fed by seepages through superficial deposits as shown on ES Figure 13.16 Groundwater impact assessment (Document Reference 6.3, APP-302 and APP-303), which are activated by periods of rainfall. The stream has not been identified through the completed surveys and its presence is known from published maps utilised by the drainage design as shown on ES Figure 13.18 Existing highway drainage plan (Document Reference 6.3, APP-306).</p> <p>Near Stockwell, an unnamed tributary of the Churn River joins the valley. The topographical connection of the dry valley in relation to the unnamed tributary of the Churn River is indicative of the stream being associated with the Churn catchment.</p> <p>b) It is difficult to ascertain the stream's hydrological relationship with the Churn Valley because of circumstantial evidence connecting the stream with the Churn as detailed above i.e. its seasonal nature, activation by rainfall and lack of survey evidence.</p>
1.6.2	Applicant	<p>Ground Instability</p> <p>a) Given the presence of disused mines in the locality, is there potential for unforeseen conduits to be present allowing the leaching of contaminants into groundwater/ controlled waters?</p> <p>b) Would any specific mitigation measures need to be included in the EMP [APP-317] to reduce or otherwise remove the potential for groundwater contamination through such conduits?</p>	<p>a) No, as presented in Environmental Statement (ES) Appendix 9.1 Preliminary Sources Study Report (Document Reference 6.4, APP-380), there is no evidence of coal mining and limited evidence of historical non-coal mining in the study area. Evidence of non-coal mining is limited to the Royal George Cave located in Birdlip, which was enlarged to allow for stone extraction. The cave is located approximately 300m west of the existing B4070, a sufficient distance away that it does not influence the scheme. It is therefore unlikely that stone extraction from this location would create significant pathways for contamination migration into or from the scheme.</p> <p>b) No, as discussed above, no or very limited historical coal or non-coal mining has been identified within the DCO boundary and there is no evidence to suggest that such mining may have taken place within the DCO boundary. Therefore, no specific mitigation measures are required.</p>

Number	Directed to	Question	Applicant's Response
1.6.4	Applicant	<p>Phase 1 Investigations</p> <p>a) With reference to paragraph 9.7.31 of ES Chapter 9 [APP-040], was the post-field work monitoring completed in mid-2021?</p> <p>b) If so, what are the results and how do they influence or inform the Proposed Development?</p>	<p>a) Yes. The monitoring of all groundwater monitoring installations inserted as part of Phase 1 and Phase 2A ground investigations continued until the end of June 2021. As recorded in the draft Statement of Common Ground with the Environment Agency, in Appendix B of the Statement of Commonality (Document Reference 7.3, APP-419), monitoring of selected installations has been extended to obtain pre-construction baseline.</p> <p>b) The results are currently being collated and reviewed and will be shared with the Environment Agency for discussion, as agreed in the draft Statement of Common Ground with the Environment Agency, in Appendix B of the Statement of Commonality (Document Reference 7.3, APP-419). Information obtained from any monitoring post-October 2020 will be considered to inform the detailed design and any detailed hydrogeological impact assessments that may be required to obtain abstraction licences.</p>
1.6.5	Applicant	<p>Imports</p> <p>In accordance with the waste hierarchy, would any inert soil imports be sourced from projects where such soil was deemed a waste?</p>	<p>As reported in ES Chapter 10 Material Assets and Waste (Document Reference 6.2, APP-041), there is no need to import inert soils for construction of earthworks.</p>
1.6.6	Applicant	<p>Stone Walls</p> <p>In Table 10-14 of ES Chapter 10 [APP-041], it states "rubble masonry/Cotswold stone walling." Can you clarify what is meant by the term 'rubble masonry', including its composition and how it would be ensured the use of such would be consistent with the character of the Cotswolds AONB?</p>	<p>Rubble masonry describes stone that has rough cut faces rather than smooth sawn faces.</p> <p>ES Appendix 2.1 Environmental Management Plan (EMP) (Document Reference 6.4, APP-317) confirms the following commitments to ensure all structures and walls use locally sourced material that is sympathetic to the character of the Cotswolds AONB:</p> <ul style="list-style-type: none"> • L5 Where practicable, structures would be designed to be sympathetic to the character of the Cotswolds AONB, using suitable facing materials such as locally sourced materials to fit existing vernacular and exposed rock faces. Facings may also include areas for colonisation with local species to visually break up the surfaces. • L14 Create a mix of new Cotswold drystone walling and hedgerows to field boundaries affected by the road infrastructure. Cotswold walls to be built in accordance with local practices and skills.

Number	Directed to	Question	Applicant's Response
			<ul style="list-style-type: none"> • L21 Bridges and structures to be of high architectural quality, finished in locally sourced material and other materials suitable to the local vernacular. <p>Annex D Landscape and Ecological Management Plan (LEMP) of ES Appendix 2.1 EMP (Document Reference 6.4, APP-321), notes that a Landscape Clerk of Works would be appointed by the contractor and be responsible for ensuring the landscape design proposals are correctly implemented, monitored and maintained in accordance with the requirements of the scheme design and Landscape and Ecological Management Plan (LEMP). The LEMP sets out how the landscape design and ecology mitigation measures would be delivered and managed for the scheme to promote the conservation and enhancement of the AONB.</p> <p>Delivery of the measures within the ES is secured under Requirement 3 of the dDCO.</p>
1.6.7	Applicant	<p>Demolition In any demolition works to buildings, and with reference to paragraph 10.10.27 of ES Chapter 10 [APP-041], are there any known or anticipated asbestos constructions that require off-site disposal?</p>	<p>No asbestos surveys have been undertaken on buildings designated for demolition, however, there is a potential for asbestos in building fabric.</p> <p>Any demolition works involving asbestos would be undertaken in accordance with the Control of Asbestos Regulations 2012. The Consents and Agreements Position Statement (Document Reference 7.2, APP-418) states "<i>It is possible that asbestos may be present in some of the buildings to be demolished as part of the scheme and as such a licence may be needed. If required, a licence will be sought by the contractor prior to demolition works taking place.</i>" This would avoid the prospect of any new significant environmental effects arising from such work.</p> <p>A Scheme Asbestos Management Plan has been prepared to plan for delivery of Asbestos Action Plans for the scheme, in line with DMRB GG 105 Asbestos Management in Trunk Road Assets. This could be provided on request at or after Deadline 2.</p>
1.6.8	Applicant	<p>Site Won Materials Is there an estimate (quantity) that can be given to the amount of 'site won materials' that would not be required for re-use on site?</p>	<p>As reported in the Environmental Statement (ES) Chapter 10 Material Assets and Waste (Document Reference 6.2, APP-041), based on the preliminary design an earthworks surplus of 65,945m³ is estimated. While the current design leads to an excess of earthworks material, there are realistic opportunities to make refinements at the detailed design stage to achieve a balance, thus removing the need to export earthworks material from site. Measures to reduce the amount of excess material are</p>

Number	Directed to	Question	Applicant's Response
			secured by commitment MAW7 of the ES Appendix 2.1 Environmental Management Plan (EMP) (Document Reference 6.4, APP-317).
1.6.9	Applicant	<p>Land Stability</p> <p>a) In locations where trees would be removed, how would the road surface and structure be reinforced to protect against natural subsidence or natural re-profiling of the soil over time?</p> <p>b) Similarly, where new trees are to be planted, would an adequate margin be left between the trees and the carriageway edge to avoid damage to the Proposed Development from roots/ root systems?</p>	<p>a) As part of the detailed design, the requirements for placement or removal of fill associated with the highway formation would be specified within an earthworks specification and also undertaken in accordance with the Soils Management Plan. The specification would be prepared in accordance with the Specification for Highway Works, Series 600 Earthworks. In accordance with this specification, formation inspections would be required that would examine the areas of vegetation removal below the highway footprint to ensure areas of larger root balls/soft spots are removed and replaced with engineered fill. This would mitigate against the risk of subsidence due to root decay. Furthermore, any placement of fill will be undertaken in accordance with controlled placement and compaction of materials as defined in the specification, which will mitigate against any long term changes in the surface of the engineered earthworks.</p> <p>The preparation of a Soils Management Plan is secured under commitment GP5 and GS11 within the Environmental Statement Appendix 2.1 Environmental Management Plan (EMP) (Document Reference 6.4, APP-317). Details of what the Soils Management Plan should cover, including an earthworks specification for construction, are set out in 4.3.8 of the EMP.</p> <p>b) Yes, as part of the highways design, trees would be set back from the edge of the verge, a minimum of 1.5m. The set back is likely to be greater to ensure adequate visibility for road users along the highway. The distance that trees can be set back will also be subject to the species of tree to ensure the root systems do not influence the pavement of the highway. This is to be further developed as part of detailed design.</p>
1.6.10	Applicant	<p>Agriculture</p> <p>a) How will the effect of the construction compounds on agricultural land be minimised?</p> <p>b) What measures and working practices will be introduced to avoid contamination of the compound areas and adjacent</p>	<p>a) The effect of the construction compounds on agricultural land is to be minimised through the following commitments in Environmental Statement (ES) Appendix 2.1 Environmental Management Plan (EMP) (Document Reference 6.4, APP-317) concerning the restoration of such land following its use:</p> <p><i>Commitment L23: Land required for construction compounds would be returned to its original use and condition as per before the works. The majority of that land will</i></p>

Number	Directed to	Question	Applicant's Response
		<p>land, and how will this be secured as part of the DCO?</p> <p>c) Would any treatment of waste soils and other material be carried out in the compounds and, if so, what measures would be secured to control and mitigate the potential effects of these operations?</p> <p>d) How will the restoration of the compound sites and condition monitoring of these and adjacent land be secured as part of the DCO?</p> <p>e) What would trigger remedial works and how would this be secured/ verified?</p>	<p><i>be agricultural use. As such, crop loss will aim to be reduced by giving advanced warning to enable farmers to plan ahead.</i></p> <p>Commitment GS13: <i>Following the completion of construction activities, agricultural land taken on a temporary basis would be restored and returned to the landowner for unrestricted agricultural use in the same agricultural condition (ALC grade) that currently exists.</i></p> <p>The Soils Management Plan will set out the requirement with respect to stripping, storage and placement of soils to allow for the restoration of agricultural land. The preparation of a Soils Management Plan is secured under commitment GP5 and GS11 within the Environmental Statement Appendix 2.1 Environmental Management Plan (EMP) (Document Reference 6.4, APP-317). Details of what the Soils Management Plan should cover, including an earthworks specification for construction, are set out in 4.3.8 of the EMP. These measures detailed within the EMP would be secured under Requirement 3 of the dDCO.</p> <p>b) A Pollution Prevention and Control Plan would be produced at detailed design. This is secured through commitment GP5 presented in ES Appendix 2.1 EMP (Document Reference 6.4, APP-317). Annex G Ground and Surface Water Management Plan of ES Appendix 2.1 EMP (Document Reference 6.4, APP-324) sets out mitigation measures with respect to pollution prevention and control during construction, including compound areas and adjacent land, which are required to be incorporated within the Pollution Prevention and Control Plan. Delivery of the measures within the ES is secured under Requirement 3 of the dDCO.</p> <p>c) Should treatment of soils and other material be required, it would be undertaken in line with the Materials Management Plan, which is Annex E of ES Appendix 2.1 Environmental Management Plan (Document Reference 6.4, APP-322). In order to ensure adequate mitigation with respect to noise, the works would be undertaken in accordance with a Noise and Vibration Management Plan. Preparation of the Noise and Vibration Management Plan is secured through commitment NV3 in ES Appendix 2.1 EMP (Document Reference 6.4, APP-317). In addition, commitment NV1 on Best Practicable Means would ensure the quietest plant and processes for all construction works, and commitment NV2 on Section 61 Consent NV2 would require detailed predictions and agreement of noise emissions with the Local</p>

Number	Directed to	Question	Applicant's Response
			<p>Authority for all works. Dust, air pollution and exhaust emissions during the works would also be undertaken in accordance with an Air Quality Management Plan to be prepared by the contractor, as secured by commitment AQ10, which will set out measures in accordance with Best Practicable Means and industry good practice. The monitoring requirements are secured in commitment AQ11.</p> <p>d) The restoration of the compound sites and monitoring of these and adjacent land is secured through commitments L23 and GS13 as detailed in point a), as well as commitments GP5 and GS11, that set out requirement for the Soils Management Plan, within the Environmental Statement Appendix 2.1 Environmental Management Plan (EMP) (Document Reference 6.4, APP-317).</p> <p>The Soils Management Plan will set out the requirement with respect to stripping, storage and placement of soils, as well as monitoring requirements, to allow for the effective restoration of agricultural land.</p> <p>e) Triggers for remedial works will be set out in the Soils Management Plan based on assessments completed as part of the reinstatement works. Refer to point a) for how the Soils Management Plan is secured.</p>
1.7 Heritage			
1.7.2	Applicant	<p>Setting of Assets</p> <p>a) What specific measures would be taken to mitigate the location specific effects on the settings of the heritage assets subject to significant adverse effects?</p> <p>b) What opportunities for improving or better presenting the asset have been taken?</p>	<p>a) At the Grade II Listed Shab Hill Barn, noise mitigation in the form of 225m long noise screening (1.2m stone wall) has been integrated into the landscape and visual mitigation design, to reduce the effect of traffic noise so far as is practicable. This would not reduce the effect on this asset to a non-significant level however.</p> <p>Further to the above, and as stated in ES Chapter 6 Cultural heritage paragraph 6.9.11 (Document Reference 6.2 APP-037) <i>“Where significant effects have been identified on listed buildings and scheduled monuments as a result of permanent changes to their settings during construction, mitigation measures that would reduce the significance of these effects are not possible.”</i></p> <p>b) Highways England has committed to the following opportunities to improve or better present heritage assets, which are stated in ES Chapter 6 paragraphs 6.9.14-6.9.16 (Document Reference 6.2, APP-037):</p> <ul style="list-style-type: none"> The removal of vegetation from the Emma’s Grove barrows would enhance their interpretation and enable them to be removed from the Historic England

Number	Directed to	Question	Applicant's Response
			<p>Heritage at Risk Register. National Highways has committed in ES Appendix 2.1 EMP (Document Reference 6.4, APP-317) to the commitment CH6 <i>“Emma’s Grove scheduled monument will have selective vegetation clearance carried out following arboricultural and ecological inspection. The method statement will be agreed with Historic England.”</i></p> <ul style="list-style-type: none"> • The improvements to the Cotswold Way National Trail and Gloucestershire Way enable greater permeability within the landscape. These allow greater access to heritage resources by members of the public. • Interpretation boards would be provided as part of the scheme, adjacent to the Cotswold Way National Trail crossing.
1.7.4	Applicant	<p>Iron Age Farmstead In Chapter 6 [APP-037] paragraph 6.7.40 refers to previous excavations establishing the remains of an Iron Age farmstead which now lies beneath the existing A417. Is this in the section to be repurposed? And could this be better revealed or is it better left covered?</p>	<p>This site lies within the section of A417 to be repurposed. Any significant remains beneath the existing A417 would have been investigated and removed prior to construction. Should some remains still survive, these would take the form of pits or ditches, which would appear as marks within the natural geology. As no impacts would occur here, national planning policy favours preservation in situ as the first measure in the hierarchy of archaeological mitigation. This would be secured by Requirement 9 of the draft Development Consent Order (Document Reference 3.1, APP-022).</p>
1.7.5	Applicant	<p>Temporary Compounds Paragraph 6.8.9 ES Chapter 6 [APP-037] suggests temporary compounds and lighting would not have a significant effect on a designated asset? Can it be clarified, with reference to the nearest listed building, the length of time that ‘temporary’ compounds would be in place for?</p>	<p>The main compound for the scheme would be located adjacent to Cowley Junction as detailed on the General Arrangement Plans (Document Reference 2.6a (Rev 1), AS-040). This compound would be in place for the duration of the works. The nearest listed building is National Heritage List for England (NHLE) Ref 1340133 – Hardings Barn located 470m from the compound.</p> <p>A secondary compound would be established adjacent to the existing A417 and Bentham Lane as detailed on the General Arrangement Plans (Document Reference 2.6a (Rev 1), AS-040). This compound would be in place for the duration of the works. The nearest listed buildings are NHLE Ref 1091761 – Whitcombe Court and NHLE Ref 1091796 – Church of St Peter, located 260m and 200m away from the compound respectively.</p> <p>It is anticipated that much of the excavated material would require processing into a suitable material to incorporate into the permanent works. A processing area would be established between ch2,200 and ch2,600 as detailed the General Arrangement Plans</p>

Number	Directed to	Question	Applicant's Response
			<p>(Document Reference 2.6a (Rev 1), AS-040). This compound would be in place for the duration of the works. The nearest listed building NHLE Ref 1091775 – Shab Hill Barn, 650m to the south.</p> <p>Several other satellite compounds would be established along the length of the site as detailed as follows:</p> <ul style="list-style-type: none"> • Ch1,100 for Bat underpass east of Fly-Up – duration 8 months. Nearest designated asset NHLE Ref 1091787 – Crickley Hill Farm, 380 m west • Ch1,600 for Grove Farm Underpass, 8 months and 4 months. Nearest designated asset NHLE Ref 1091787 – Crickley Hill Farm, 900m west • Ch2,000 for Cotswold Way crossing, 4months. Nearest designated asset Emmas Grove Barrows, NHLE 1017079, 150m east • Ch2,200 for Ullenwood junction, 12months. Nearest designated asset Emmas Grove Barrows, NHLE 1017079, 300 m south • Ch3,300 for Shab Hill junction, 12 months. Nearest Listed building NHLE ref 1091775 – Shab Hill Barn, 250m west. • Ch4,000 for Cowley Overbridge, 9 months. No designated assets within 300m. • Ch4,600 for Stockwell Overbridge, 9 months. Nearest designated asset NHLE ref 1341766 – Gold Heart Inn located 450m away from scheme. • Barrow Wake Car Park, 6 months. Nearest designated asset NHLE ref 1091775 – Shab Hill Barn, 650m east. <p>These compounds would be a new component in the setting of some designated heritage assets, however the limited duration and the inherent reversibility of these works would mean that the change would not have a significant effect on a designated asset.</p>
1.7.6	Applicant	<p>Temporary Compounds and Other Accesses Will compounds, haul roads and accesses (permanent and temporary) be subject to archaeological trenching to determine where, if any, protective fencing should be erected and/ or micro-siting options to avoid loss,</p>	<p>Temporary compounds haul roads and accesses (permanent and temporary) would be subject to archaeological mitigation. This is detailed and secured by Requirement 9 of the draft DCO (Document Reference 3.1, APP-022).</p> <p>Paragraphs 2.5 to 2.5.12 of ES Appendix 2.1 EMP Annex C Detailed Archaeological Mitigation Strategy and Overarching Written Schemes (Document Reference 6.4, APP-320) also sets out the strategy for archaeological mitigation including measures to determine where, if any, protective fencing should be erected. This would ensure the</p>

Number	Directed to	Question	Applicant's Response
		removal or compaction of the assets?	protection of archaeological remains which are to be retained and the recording of archaeological remains otherwise affected by the scheme.
1.7.7	Applicant	Mitigation Measures a) For the mitigation measures listed in 6.9.2, who makes the decision as to what level of mitigation is imposed? b) Is this in consultation with the LPA or Historic England?	a) The level of mitigation would be decided as detailed in and secured by Requirement 9 of the draft DCO (Document Reference 3.1, APP-022) which requires the scheme giving effect to Chapter 6 of the ES to be consulted on with the relevant planning authority and the local highway authority, agreed with the County Archaeologist and submitted to and approved in writing by the Secretary of State. b) Please see (a), above.
1.7.8	Applicant, Historic England	Paleoenvironmental Deposits In paragraph 6.8.7 of ES Chapter 6 [APP-037] there is reference to paleoenvironmental deposits being affected by hydrological changes. There are however no further references to this within the context of this ES Chapter (other than a brief mention at 6.10.17 discounting any effect). Why is this considered sufficient consideration of the matter and please explain any effects?	The reference at 6.8.7 is erroneous. This will be amended in the next submission of Environmental Statement (ES) Updates and Errata (Document Reference 6.7, AS-051) to be submitted at Deadline 2. As such the reference at 6.10.17 is correct. This conclusion was reached based on: <ul style="list-style-type: none"> • The results of trial trenching, which identified no archaeological deposits that would fall into this category; and • Discussion with specialists regarding the hydrology baseline and assessment, which confirmed that the scheme would not result in changes to the existing water regime that could affect such remains, even if these were present.
1.7.11	Applicant	Archaeological Assets How will sub-surface archaeology within the areas HE intends to purchase be protected after construction activities?	The protection of sub-surface archaeology after construction, within areas National Highways intends to purchase, is detailed and secured by Requirement 9 of the draft DCO (Document Reference 3.1, APP-022). In some areas for landscape or ecological mitigation, archaeological remains could be impacted by the planting of trees. In those areas, buried remains would be excavated and preserved by record in advance of construction. In areas where grassland is proposed, this would be considered the optimum conditions for the long-term preservation of buried archaeological remains. As these areas are expected to be returned to grazing, no specific management measures are proposed.
1.7.12	Applicant	Archaeological Assets What would be the procedure followed to investigate and protect	The procedure to investigate and protect unforeseen cultural heritage finds made during the course of the works is detailed and secured by Requirement 9 of the draft DCO (Document Reference 3.1, APP-022) which includes the following:

Number	Directed to	Question	Applicant's Response
		<p>unforeseen cultural heritage finds made during the course of the works and what would happen in the event of major finds fundamentally affecting the progress of the works?</p>	<p><i>(4) Any archaeological remains not previously identified which are revealed when carrying out the authorised development must be:</i></p> <ul style="list-style-type: none"> <i>– retained in situ and reported to the County Archaeologist as soon as reasonably practicable; and</i> <i>– subject to appropriate mitigation as set out in the archaeological framework strategy and mitigation agreed with the County Archaeologist.</i> <p>Further details on the procedures to investigate and protect unforeseen cultural heritage finds are also provided in Section 3 Environmental Statement (ES) Appendix 2.1 Outline EMP Annex C Detailed Archaeological Mitigation Strategy and Overarching Written Schemes of Investigation (Document Reference 6.4, APP-320). This sets out that a detailed archaeological watching brief will be maintained during construction, and in the event that archaeological remains are encountered, construction activity will be paused to enable the remains to be recorded.</p>
<p>1.7.14</p>	<p>Applicant</p>	<p>Vibration Effects How would the effects of vibration on below ground heritage assets incurred during construction, either directly or arising from haulage or compound activities, be monitored and harm prevented?</p>	<p>The ES does not identify vibration effects on buried archaeological remains. Where archaeological remains are located within compound areas, these would be preserved in situ where this is practicable. There are no methods to monitor vibration on in-situ buried archaeological remains during construction.</p>
<p>1.7.16</p>	<p>Applicant</p>	<p>Assessment Limitations ES Chapter 6: Cultural Heritage [APP-037] explains that approximately 10% of the area within the DCO boundary has not been surveyed. Can the Applicant confirm where the areas are (potentially illustrated on a map) which have not been surveyed (as stated in paragraph 6.5.1 of ES Chapter 6 [APP-037]) and why it is appropriate not to survey these areas?</p>	<p>ES Chapter 6 Cultural Heritage (Document Reference 6.2, APP-037) explains that less than 10% of the DCO boundary has not been surveyed. The principal reason for geophysical survey not being undertaken are constraints associated with current ground cover, predominantly at Shab Hill. These surveys cannot be undertaken where ground cover comprises long grass or scrub due to health and safety risks associated with carrying equipment over uneven surfaces. Often this constraint can be managed through removal of vegetation, however in this location this was not possible as it would result in impact upon ecological habitats. Trial trenching was also excluded from this area for the reason of health and safety and damaging of ecological habitats.</p> <p>Elsewhere within the DCO Boundary, geophysical surveys were not undertaken due to lack of access agreement. These areas, predominantly around Stockwell, are proposed for completion in early 2022, subject to access agreement. This survey was not required for the purposes of assessment, as the areas were included in the trial</p>

Number	Directed to	Question	Applicant's Response
			<p>trenching; however, completion will enable National Highways to ensure that appropriate mitigation is implemented</p> <p>National Highways is preparing a plan showing the areas in question, which will be submitted to the Examination once ready.</p>
1.7.18	Applicant	<p>Effect on Significance The categorisation of magnitude of impact and significance of effect is in the context of the Environmental Statement terminology however there is no indication of how this relates to 'substantial' or 'less than substantial' effects in policy terms, albeit paragraph 6.4.5 (in the context of magnitude of impacts) states: 'It also reflects guidance on 'substantial harm' and 'less than substantial harm' in the NPPF and established methodologies in the DMRB'. Can the conclusions be clarified to confirm the position in respect of the policy tests and whether any harms identified would be 'substantial' or 'less than substantial'?</p>	<p>In Chapter 10 of the Case for the Scheme (Document Reference 7.1, APP-417), National Highways has set out how the conclusions of Environmental Impact Assessment (EIA) for cultural heritage (as reported in ES Chapter 6 Cultural Heritage (Document Reference 6.2, APP-037) relate to the policy tests and requirements of the National Policy Statement for National Networks (NPSNN). It identifies that the scheme would be compliant with the NPSNN, which is the primary policy document against which the scheme must be determined by the Secretary of State under Section 104 of the Act. Furthermore, paragraphs 11.1.35 and 11.1.36 of the Case for the Scheme (Document Reference 7.1, APP-417) identify that the scheme is in compliance with the policy requirements of the National Planning Policy Framework (NPPF) in relation to the historic environment.</p>
1.8 Landscape and Visual			
1.8.1	Applicant	<p>Alternatives Table 2-1 [APP-033] states this is a landscape-led highways improvement scheme. What would the landscape implications have been if the route and corridor of the existing A417 were developed as an alternative compared to the re-routing of the network through undeveloped fields?</p>	<p>Chapter 2 of the Case for the Scheme (Document 7.1 (APP-417)) provides a summary of the scheme's development and the options considered. Section 4 of the Scheme Assessment Report (Document Reference 7.4 (APP-420)) explains the options which were considered in the options appraisal carried out by Highways England following the inclusion of the scheme in RIS1. Further detail on the technical elements of that appraisal are provided in the Technical Assessment Report (Document Reference 7.9 (APP-425)). Further information can be found on that options appraisal in ES Chapter 3 Assessment of Alternatives (Document Reference 6.2 (APP-034)), and the Route Options Consultation Report (Document Reference 7.5 (APP-421)).</p>

Number	Directed to	Question	Applicant's Response
			Further detail on the manner in which the various route options were considered by National Highways during the development of the scheme is provided in response to written question ExA 1.1.7(a) above. The landscape implications of the current scheme, as well as those of a variety of other options, including those which used the existing route corridor of the A417, were considered as part of the option identification and sifting process described in more detail in the Technical Assessment Report (Document Reference 7.9 (APP-425)).
1.8.2	Applicant	<p>LVIA Methodology Please confirm how the visual assessments relating to identified residential receptors referred to in ES Chapter 7 [APP-038] were undertaken. Was professional judgement and the nearest or the most representative publicly accessible location used, or were individual occupants contacted for access and assessment?</p>	<p>For the assessment reported in ES Chapter 7 Landscape and Visual Effects (Document Reference 6.2, APP-038) professional judgement and the nearest or most representative publicly accessible locations were used to assess the likely visual effects on communities.</p> <p>Views from private properties were scoped out, as described in Paragraph 7.10.5 of the 2020 Preliminary Environmental Information Report (PEI Report), which was published and consulted upon as part of the 2020 supplementary statutory consultation.</p>
1.8.3	Applicant	<p>LVIA Methodology ES Chapter 7 [APP-038], paragraph 7.5.12 identifies a number of typical maximum heights of temporary features during construction, including compounds and portacabins of 1 – 2 storeys, and stockpile height of 10-15m for excavated geological material. Can the Applicant confirm:</p> <p>a) Whether the maximum permitted heights of temporary features will be secured within the DCO (as it is not uncommon for construction compounds to be several storeys high which could change the</p>	<p>a) Typical building heights which have informed the environmental assessment of the scheme are identified in the ES. There is no express requirement within the dDCO setting out the maximum permitted heights of such temporary features. It is unlikely that there would be a stacking of portacabins of greater than two storeys where there is sufficient compound space to make that unnecessary. Should the ExA require such a control, it could be readily introduced into ES Appendix 2.1 Environmental Management Plan (EMP) (Document reference 6.4, APP-317).</p> <p>b) The temporary landscape and visual impacts of stockpile material has been assessed as part of Environmental Statement Chapter 7 Landscape and Visual Effects (Document Reference 6.2, APP-038). Paragraph 2.9.3 of ES Chapter 2 The project (Document Reference 6.2, APP-033) states <i>“It is anticipated that works to the online and offline sections would occur at the same time so that material movements between areas of cut and fill can take place simultaneously, thereby minimising stockpile requirements.”</i></p>

Number	Directed to	Question	Applicant's Response
		<p>temporary landscape and visual impacts); and</p> <p>b) Why the Applicant considers it necessary to generate stockpiles up to 15m in height, as this has the potential to generate additional landscape, visual and health and safety issues?</p>	<p>Stockpiles at 10-15m in height are typical on large infrastructure projects adhering to industry standards. To limit the construction footprint and mitigation impacts on local landowners, landscape and views, the stockpile of material would be limited to several locations. Stockpiles would be constructed, compacted and with recess slopes at no greater than 1:2, which is a safe angle of repose for the material that will be encountered. Were the ExA minded to require such a control within the dDCO, it could be readily introduced into a further iteration of the Appendix 2.1 to the ES Environmental Management Plan (EMP) (Document reference 6.4, APP-317)</p>
1.8.4	Applicant	<p>LVIA Methodology ES Chapter 7 [APP-038] paragraphs 7.5.1 and 7.5.3 indicates that a number of features are not included within the photomontages or Zone of Theoretical Visibility (ZTV). The list of features not included contains large infrastructure such as the 37m wide Gloucestershire way crossing. Can the Applicant confirm:</p> <p>a) the justification for not including these features within the photomontages and ZTV (it is noted that the photomontages were prepared based on a previous design iteration); and</p> <p>b) that revised photomontages based on the current design will be submitted to the examination, including, where required, relevant updates to ES Chapter 7 [APP-038]?</p>	<p>a) ES Chapter 7 Landscape and Visual Effects (Document Reference 6.2, APP-038), paragraph 7.5.1, states that design changes were deemed not large enough to give rise to noticeable changes in either the Zone of Theoretical Visibility (ZTV) or the photomontages and would not affect the assessment of landscape and visual effects. The Chapter assesses the likely significant landscape and visual effects of the final scheme, as submitted for Examination and are not based solely on the ZTV or photomontages. Although the final designs are not represented within the ZTV and photomontages, earlier versions of the structures were represented. With regards to the Gloucestershire Way crossing, a horizontal change in crossing width would not generate a large change in the digitally generated ZTV or photomontages, vertical changes or features that increase height would more likely generate a change.</p> <p>b) It is not anticipated that revised photomontages will be submitted to the Examination as mentioned the changes would not be large enough to be noticeable. No updates would be needed to ES Chapter 7 Landscape and Visual Effects (Document Reference 6.2, APP-038) as this assesses the likely impacts of the final scheme as submitted to the Examination.</p>
1.8.5	Applicant	<p>Scope of the ES Within the Landscape and Visual Chapter of the ES [APP-038], there are instances where an aspect is proposed to be scoped out of the assessment with limited supporting</p>	<p>a) In accordance with the EIA Regulations and Guidelines for Landscape and Visual Impact Assessments, Third Edition, the aim of ES Chapter 7 Landscape and Visual Effects (Document Reference 6.2, APP-038) is to present a proportionate assessment that focuses on reporting likely significant effects. As a result, a number of receptors were scoped out as the scheme would unlikely give rise to significant effects. The majority of these receptors were consulted on with statutory consultees</p>

Number	Directed to	Question	Applicant's Response
		<p>evidence. Can the Applicant provide additional information on their decision to scope out the following:</p> <p>A. Landscape Receptors:</p> <ul style="list-style-type: none"> • Table 7-11, AONB LCA 7B Bisley plateau; • Table 7-11, AONB LCT 10 High Wold Dip Slope Valley; • Table 7-11, AONB LCA 10A Middle Churn Valley; • Table 7-11, AONB LCT 18, Settled Unwooded Vale; and • Table 7-11, LCA 18A, Vale Of Gloucester Fringe. <p>B. Visual receptors:</p> <ul style="list-style-type: none"> • For the Community of Birdlip, Table 7-12 notes that “Parts of the community may experience direct views, large changes which may appear dominant or form a noticeable feature in views or their visual resource at close proximity from locations to the north and east of Birdlip”. Can the Applicant provide a justification for not including the assessment within the main ES chapter, as it has currently been scoped out and is reported in Appendix 7.5 [APP-352], despite the assessment indicating that it is of a medium sensitivity with a potentially moderate adverse effect during construction, which therefore may require scoping 	<p>as part of the 2020 Consultation and evidenced in the Preliminary Environmental Information Report (PEI Report) paragraphs 7.10.4 to 7.10.5 and Table 7-16, published at that consultation. The Landscape receptors scoped out at this stage included: LCA 7B Bisley Plateau, LCA 8A Toadsmoor, Holy Brook and Upper Frome Valleys, LCA 8C Upper Churn Valley, LCT 10 High Wold Dip Slope Valley, LCA 10A Middle Churn Valley, LCA 18A Vale of Gloucestershire Fringe.</p> <p>While undertaking the assessment of landscape and visual effects it became clear that additional receptors would not experience significant effects. The reasons for this are documented in paragraphs 7.10.9 to 7.10.10 and Table 7-11 of ES Chapter 7.</p> <p>Draft Statements of Common Ground with the Cotswolds Conservation Board and Natural England both agree with the scope of ES Chapter 7, as recorded in Matter Agreed 14.1 of Appendix E and Matter Agreed 5.1 of Appendix C of the Statement of Commonality (Document Reference 7.3, APP-419).</p> <p>b) Table 7-12 of ES Chapter 7 Landscape and Visual Effects (Document Reference 6.2, APP-038) incorrectly states that the community of Birdlip may experience large changes in views which may appear dominant or form a noticeable feature in views. Table 2-3 in ES Appendix 7.5 Visual Assessment Tables (Document Reference 6.4, APP-352) correctly sets out the likely visual effects of the scheme. The community of Birdlip is reported to have a medium sensitivity to the likely construction impacts and an overall effect of minor, adverse and not significant, as the community of Birdlip would have limited views of the proposed development.</p> <p>Table 7-12 incorrectly states that the community of Cold Slad is scoped in. This will be corrected in the next submission of the ES Updates and Errata (Document Reference 6.7, AS-051) submitted at Deadline 2.</p> <p>Table 2-5 in ES Appendix 7.5 Visual Assessment Tables (Document Reference 6.4, APP-352) reports that the community of Cold Slad would experience a small visual change during the construction phase and a very minor visual change as a result of the operational scheme, giving rise to a slight, adverse and not significant effect at construction, a negligible significance of effect during year 1 of operation and a neutral significance of effect at operational year 15. This will also be corrected in the</p>

Number	Directed to	Question	Applicant's Response
		<p>into the assessment in order to consider mitigation measures?</p> <ul style="list-style-type: none"> For the community of Cold Slad, Table 7-12 indicates that this is to be scoped in, however the assessment is presented within Appendix 7.5 [APP-352] and the accompanying text appears to indicate that the Applicant has decided to scope this out. Can the Applicant provide clarification as to the intended location of this assessment? 	<p>next submission of the ES Updates and Errata (Document Reference 6.7, AS-051) submitted at Deadline 2.</p>
1.8.9	Applicant	<p>Construction Impacts The construction phase is estimated to be a period of 33 months.</p> <p>a) During the construction, would tall vehicles (cranes, telescopic cranes etc) be required (for example in the construction of bridges) or other large machinery (for construction of retaining walls in cut-ins) be present along the course of the Proposed Development?</p> <p>b) How long are these anticipated to be in situ, and have they been taken into account when conducting the LVIA?</p>	<p>a) During the construction, tall cranes and piling rigs would be required for some aspects of the scheme for temporary periods, including the installation of bridges and underpasses.</p> <p>b) Subject to appointing a contractor, this would be known at detailed design stage, however at this stage National Highways estimate a duration of 4-24 months subject to the location and nature of works.</p> <p>The LVIA does assess the likely impacts of the construction phase, including the use of large machinery and tall cranes as listed in ES Chapter 7 Landscape and Visual Effects (Document Reference 6.2, APP-038) Paragraph 7.8.7 and mentioned in assessment Tables 7-14. Cranes are also mentioned in Table 7-20 and Table 7-30.</p>
1.8.10	Applicant, Natural England, CCB, GCC, TBC, CDC	<p>Viewpoints</p> <p>a) Clarify what consultation was undertaken with stakeholders on the locations of viewpoints used for photomontages and whether agreement was reached. If agreement was not reached,</p>	<p>a) The locations of all viewpoints were agreed with stakeholders at Technical Working Groups and via email and telephone calls as set out in ES Chapter 7 Landscape and Visual Effects (Document Reference 6.2, APP-038) Paragraphs 7.4.81 to 7.4.88. The below references within the Statements of Common Ground (SoCGs) in the Statement of Commonality (SoC) (Document Reference 7.3, APP-419) set out relevant consultation with stakeholders, to the relevant page/paragraph relating to viewpoint locations for photomontages:</p>

Number	Directed to	Question	Applicant's Response
		<p>provide details of the differences between parties.</p> <p>b) Do you have any comments on the presentation of baseline photographs and visualisations?</p> <p>c) Are additional viewpoints required and, if so, show these using maps and explain the rationale as to why such viewpoints need evidencing?</p>	<ul style="list-style-type: none"> • Table 2-1 in the Joint Councils SoCG (Appendix A of SoC) • Matter Agreed Reference Number 5.1 and 5.6 in the Natural England SoCG (Appendix C of the SoC) • Table 2-1 for HBMCE (Historic England) SoCG (Appendix D of SoC) • Matter Agreed Reference Number 14.1 for the Cotswold Conservation Board SoCG (Appendix E of the SoC) • Table 2-1 Page 4 for National Trust SoCG (Appendix G of the SoC) <p>b) National Highways has no comments on the presentation of baseline photographs and visualisation as they are based on the Landscape Institute's Technical Guidance Note 06/19 Visual Representation of development proposals, Sept 2019.</p> <p>c) A total of 47 viewpoints were visited as part of the visual assessment. No additional viewpoints are required.</p>
1.8.11	Applicant	<p>Lighting Proposals</p> <p>a) In paragraph 7.4.67 it states the scheme is not proposed to be lit. Does this mean that the road underneath the bridge for the Gloucestershire Way will be unlit?</p> <p>b) Would there be a need for pedestrian lighting on the bridges for safety?</p> <p>c) If lighting is required, have the implications of this on bat species been assessed?</p>	<p>a) The preliminary design for the scheme doesn't include any road lighting provision with the exception of on-demand lighting at Grove Farm underpass, which has been provided primarily for the benefit of walkers, cyclists and horse-riders. The underside of bridges, including the Gloucestershire Way crossing, would not be lit. Following a request from Gloucestershire County Council (GCC), National Highways is currently assessing the provision of enabling infrastructure for lighting at Ullenwood junction only. This is reflected in the updated draft Statement of Common Ground with the Joint Councils in Appendix A of the Statement of Commonality (Document Reference 7.3 Rev 1).</p> <p>b) There is not a safety requirement for lighting on bridges. The roads including over-bridges are designed with the required forward visibility and stopping sight distance. The designs of the road bridges incorporate soft and hard verge to allow users to step out of the carriageway if necessary.</p> <p>DMRB standard CD 143 E/6 sets out that walking, cycling and horse-riding routes should not be lit where they are adjacent to an unlit highway. Walking, cycling and horse-riding routes away from the highway extents in rural areas should not be lit unless:</p> <ol style="list-style-type: none"> 1) high user flows are expected;

Number	Directed to	Question	Applicant's Response
			<p>2) routes are expected to be used as school or commuter routes. It is anticipated that traffic flows would be low on recreational routes.</p> <p>c) The scheme has been designed to minimise and mitigate the effects of the scheme on protected species, including bats. The scheme is assessed in ES Chapter 8 Biodiversity (Document Reference 6.2, APP-038) on this basis. ES Chapter 2 The Project (Document Reference 6.2, APP-033) Paragraph 2.6.99 states that in line with the Cotswolds Dark Skies & Artificial Light Position Statement published by Cotswolds Conservation Board, there would be no permanent road lighting associated with the scheme.</p> <p>ES Chapter 2 The Project (Document Reference 6.2, APP-033) Paragraph 2.6.62 states that the only structure where lighting is proposed is Grove Farm underpass which includes low lux, directional, demand sensitive lighting. The demand sensitive lighting would be available between half an hour after dawn and until half an hour before sunset between 1st April and 31st October. From 1st November – 31 March, the demand sensitive lighting would be available 24-hours a day.</p>
1.8.12	Applicant	<p>Zone of Theoretical Visibility What would be the visual impact consequences by the additional 12 metres of the Gloucestershire Way crossing, which were not taken into account in the ZTV?</p>	<p>The Zone of Theoretical Visibility (ZTV) presents an earlier design iteration of the Gloucestershire Way crossing at a width of 25m. The additional 12 meters of horizontal width would not materially affect the digital representation of the scheme presented in the ZTV. The main visual concern would be if the bridge changed in height or location. The ZTVs were prepared for public consultation 2019 (PEI Report Figure 7.1 Visibility and Indicative Viewpoints and Figure 7.2 Visibility (trucks) and Indicative Viewpoints¹), to establish the initial extent of areas where views of the scheme may be experienced which, combined with field work and desk study, influenced the study area radius. Two sets of ZTV were prepared, one representing the scheme with Heavy Goods Vehicles (HGVs) and one without, which were both used to inform the assessment.</p>
1.8.13	Applicant	<p>Zone of Theoretical Visibility Section 2.6 of ES Chapter 2 [APP-033] provides details of the physical characteristics and construction activities required for the Proposed Development. Details are provided regarding the mainline, side roads</p>	<p>a)) There is no need to for an express control with the dDCO for a height limit for gantries and signage-bearing structures. The preliminary scheme design does not require any gantries, and there are none shown on the General Arrangement Plans (Document 2.6a, ASS-040). All signs have been designed to be supported by posts rather than major structures to minimise the visual impact and complex structural design. The height and size of signs would be defined at detailed design stage,</p>

Number	Directed to	Question	Applicant's Response
		<p>and structures. Table 2.3 provides details of the structures which are required for the Proposed Development, which consists of two underpasses, two crossings, one underbridge and two overbridges. Paragraph 2.6.40 states that “details of surfacing, signage and other arrangements would be determined with GCC at the detailed design.”</p> <p>a) Will there be a commitment to a height limit for gantries and signage-bearing structures?</p> <p>b) Additional vertical structures are not included in the projected ZTV because their location or number are not known at this stage. At what stage will these elements be known and what are the anticipated effects/ visibility of such structures?</p> <p>c) Is there a commitment that these will not be lit?</p>	<p>informed by the operational requirements defined in the Traffic Signs Regulations and General Directions 2016.</p> <p>b) Elements of the scheme such as signage have been considered as part of the assessment in ES Chapter 7 Landscape and Visual Effects (Document Reference 6.2, APP-038). They would form part of the wider infrastructure that is required with large highways infrastructure.</p> <p>c) In line with the Cotswolds Dark Skies & Artificial Light Position Statement published by Cotswolds Conservation Board, there would be no permanent lighting associated with the scheme. This applies to road signs, which would be reflectorised.</p>
1.8.14	Applicant	<p>Tranquillity</p> <p>a) How would gantries and other vertical structures impact on tranquillity?</p> <p>b) Is it the Applicant's case that there would not be any increased adverse effect on tranquillity by way of erecting these features, or will further landscaping or design mitigation need to be incorporated into the detailed design to minimise localised impacts?</p>	<p>a) Gantries would not form part of the scheme as set out in Environmental Statement (ES) Chapter 2 The Project (Document Reference 6.2, APP-033). Other vertical structures are proposed as part of the scheme, such as CCTV and number recognition cameras, and would impact tranquillity as assessed in ES Chapter 7 Landscape and Visual Effects (Document Reference 6.2, APP-038), Table 7-13.</p> <p>b) Vertical structures (CCTV and number recognition cameras), as noted in paragraph of 2.4.104 of ES Chapter 2 The Project (Document Reference 6.2, APP-033), would not give rise to any increased adverse effects on tranquillity about those reported in ES Chapter 7 Landscape and Visual Effects (Document Reference 6.2, APP-038). The scheme design, including mitigation, accounts for five CCTV cameras (three on Crickley Hill, one at Shab Hill junction, one at Cowley junction) and four automatic number plate recognition cameras. The height and design of camera would be defined at detailed design stage. These features would be immaterial to the</p>

Number	Directed to	Question	Applicant's Response
			assessment judgements of the ES Chapter 7 Landscape and Visual Effects (Document Reference 6.2, APP-038).
1.8.16	Applicant	Landscape Works Annex D to the EMP [APP-317] contains a Landscape and Ecological Management Plan. The Plan is not however referenced as influencing the written landscaping scheme in requirements 5 or 6. Why is this?	<p>The management plans listed in Requirement 3(2)(e) would be prepared as standalone documents and appended to the EMP (construction stage).</p> <p>The difference between Annex D Landscape and Ecological Management Plan (LEMP) of ES Appendix 2.1 EMP (Document Reference 6.4, APP-321) and the environmental masterplan, on which the landscaping scheme is to be based, is explained in response to ExA Question 1.1.28. In summary, the environmental masterplan concerns what is to be delivered by the Applicant, whereas the LEMP controls how that is to be delivered. This is the same approach taken to the delivery of the highway elements of the authorised development; where what is to be delivered is controlled by Requirement 11, and how that is to be delivered controlled by the EMP (construction stage) and other management plans under Requirement 3. It is suggested that this is a sensible allocation of responsibilities to the separate respective documents.</p> <p>The Applicant did not think it necessary to merge the separate functions of different control documents into a single document in the manner envisaged by this question. However, it has suggested additional drafting to a revised Requirement 6(2) within the dDCO submitted at Deadline 1 which would require the written landscaping scheme to be implemented in accordance with that requirement to be (expressly) in accordance with the LEMP. It is hope that will address any residual concerns the ExA may have had.</p>
1.8.17	Applicant	<p>Good Design</p> <p>a) Set out the approach taken for scheme design in response to these criteria as they relate to landscape architecture, visual appearance and integration with the public realm.</p> <p>b) Set out the design approach to the proposed overbridges and underpasses, and explain how they constitute good design.</p>	<p>a) The design approach taken for the scheme is reflected in the scheme vision, objectives and sub-objectives as set out in ES Chapter 2 The Project (Document Reference 6.2, APP-033). The design approach also follows DMRB LD 117 Landscape Design and aimed to integrate across different disciplines and within disciplines, taking a holistic approach to landscape architecture, visual appearance and public realm. These sub-disciplines were not split out.</p> <p>The Design Summary Report (Document Reference 7.7, APP-423) pages 13-29 set out the landscape-led approach and how it demonstrates good design. The design development was informed through attendance at several Design Council Reviews and via engagement with stakeholders in Technical Working Groups. This was</p>

Number	Directed to	Question	Applicant's Response
			<p>achieved through avoiding, reducing and mitigating the effect of the scheme on the AONB and landscape character.</p> <p>b) The Design Summary Report (Document Reference 7.7, APP-423) section 3.5 sets out the design approach to all crossings in the scheme.</p>
1.9 Noise and Vibration			
1.9.2	Applicant	<p>Enhancement</p> <p>a) With reference to paragraph 11.9.10, how would judgement calls be made as to whether there are 'opportunities' for enhancements?</p> <p>b) Would the judgements involve consultation with all relevant authorities and consultees?</p> <p>c) Would an enhancement in one discipline potentially give rise to another effect beyond the scope of the ES? (For example, as per paragraph 11.9.10, if extension of screening would provide noise improvements, could that extension negatively affect views and vistas that may be important, but not considered affected under the current Proposed Development?)</p>	<p>a) The potential for enhancement opportunities at the detailed design stage could arise, for example, because minor design detail changes to earthworks would allow screening to be optimised (e.g. brought closer to the highway) to improve its effectiveness without altering its height. In relation to noise mitigation enhancements, any such opportunities would be reviewed by the Applicant's technical noise specialists and if a professional judgement was made that there is potential for an enhancement to noise mitigation, the changes would be modelled to determine if these would result in benefits at sensitive receptors.</p> <p>b) If the opportunity for an enhancement to the noise mitigation proposed, were to arise, it would be discussed with the relevant authorities and any other relevant consultees as considered appropriate by the relevant planning authority. Requirement 13 under the draft Development Consent Order (dDCO) (Document Reference 3.1, APP-022) ensures that written details of the noise mitigation to be delivered must be approved by the Secretary of State (SoS) following consultation with the relevant planning authority prior to commencement of the scheme.</p> <p>c) The potential for noise mitigation enhancements to affect other design considerations, such as visual impact, would be reviewed by the design team including the relevant technical specialists. If the enhancements were considered suitable (not resulting in adverse effects with regard to other environmental factors), any such changes would be agreed with the relevant authorities and consultees, as noted in the response above to part (b) of this question. Requirement 13(2) under the dDCO ensures that where the mitigation proposed within the written noise details to be approved by the SoS materially differs from the mitigation identified in the environmental statement, the undertaker must provide evidence with the written details submitted that the mitigation proposed would not give rise to any materially new or materially worse adverse environmental effects in comparison with those reported in the environmental statement taking into account the mitigation identified in it.</p>

Number	Directed to	Question	Applicant's Response
1.9.3	Applicant	<p>Night Noise Should there be a schedule either in the EMP of the dDCO setting out the locations where overnight working is to take place, the hours of use for such working and limiting the noise emissions arising during this time?</p>	<p>Environmental Statement (ES) Appendix 2.1 Environmental Management Plan (EMP) Annex B Construction Traffic Management Plan (CTMP) (Document Reference 6.4, APP-319) sets out the expected durations of carriageway and slip road closures at each location, which corresponds with where night works have been assessed in the noise assessment.</p> <p>Paragraphs 11.10.41 to 11.10.46 and Table 11-18 of the ES Chapter 11 Noise and Vibration (Document Reference 6.2, APP-042) describe and set out the predicted night-time noise levels at noise sensitive receptors as a result of the closest works to any individual receptor. Assumptions regarding the plant to be used are shown in Table 1-2 of ES Appendix 11.3 Construction Plant Machinery (Document Reference 6.4, APP-392). As the minimum temporal thresholds from DMRB LA111 (based on BS 5228-1 Annex F example) are not expected to be exceeded, effects are not assessed as significant, and no further detail is deemed necessary for the ES.</p> <p>Night-time noise impacts will be managed through the Noise and Vibration Management Plan which is secured by commitment GP5 Management Plans in ES Appendix 2.1 EMP (Document Reference 6.4, APP-317), which provides that the contractor shall prepare Management Plans including a Noise and Vibration Management Plan. This is also secured by commitment NV3, which provides that the plan must include the management and monitoring measures detailed in Section 4.3 EMP (construction) Management Plans of ES Appendix 2.1 EMP (Document Reference 6.4, APP-317). The relevant measures include identifying likely noisy activities in the construction programme, the proposed noise mitigation measures, and a strategy for actively communicating this information to local communities.</p> <p>Night-time noise impacts would also be managed through Section 61 consent conditions where applicable. The Section 61 consent is described in more detail in ES Appendix 2.1 EMP (Document Reference 6.4, APP-317), Table 3.7, NV2, and Section 4.3.6 for the NVMP.</p>
1.9.4	Applicant	<p>SOAEL and LOAEL Provide a more detailed explanation of paragraph 11.4.26 in ES Chapter 11 [APP-042] in respect of the underlined word 'may.' What are the</p>	<p>The criteria for the assessment of operational noise significance is given in DMRB LA 111 Table 3.58 and reproduced in the Environmental Statement (ES) Chapter 11 Noise and Vibration (Document Reference 6.2, APP-042), Tables 11.10 to 11.14.</p>

Number	Directed to	Question	Applicant's Response
		<p>reasons why the effects may not be identified in the assessment as likely significant adverse effects?</p>	<p>Where the calculated noise at a receptor exceeds the relevant SOAEL threshold, then this will be assessed as a likely significant adverse effect. Where the calculated noise at a receptor is less than the SOAEL but greater than the relevant LOAEL, this may be assessed as a likely significant adverse effect. LA 111 Paragraph 3.59 states that where the magnitude of noise change is negligible in the short term (i.e., a small impact defined in LA 111 Table 3.54a) this will not give rise to a significant effect. Paragraph 11.4.26 of the ES Chapter 11 Noise and Vibration (Document Reference 6.2, APP-042) confirms that effects between the SOAEL and LOAEL 'may' be assessed as significant because not all impacts between these thresholds would be assessed as significant according to the LA 111 Standard. Paragraphs 11.4.27-11.4.28 refer to the full assessment criteria where the method from LA 111 is set out in more detail. It is that criteria which influence the exercise of judgment of significance of effects for impacts between SOAEL and LOAEL.</p>
1.9.5	Applicant	<p>Noise Insulation</p> <p>a) With reference to 11.10.114, for those addresses that exceed the criteria to be eligible for noise insulation, how great an exceedance beyond NIR. LA 111 would each property experience?</p> <p>b) What type of noise insulation would be used and how would it perform in terms of reducing noise beyond the NIR. LA 111?</p> <p>c) Has the insulation to be provided been budgeted for in the Funding Statement?</p> <p>d) Does the dDCO contain a provision enabling the Applicant to enter onto land for the purposes of providing noise insulation into these properties?</p> <p>e) If noise insulation is required to a listed building, would the Applicant be submitting for approval an application for Listed</p>	<p>a) As stated in paragraph 11.10.118 of ES Chapter 11 Noise and vibration (Document Reference 6.2, APP-042), the noise insulation regulations (NIR) would not apply directly to these properties as eligibility relates to dwellings not more than 300 metres from the new or altered scheme. There are 17 noise sensitive properties where noise levels are predicted to exceed the SOAEL with noise increases (i.e. impact as a result of the proposed scheme) of just over 1dB in the short term as explained in paragraph 11.10.115 and 11.10.116 of the ES Chapter 11 (Document Reference 6.2, APP-042). The existing noise levels for these properties are already above the NIR threshold of 68dBLA10,18hr for the baseline situation.</p> <p>b) Any noise insulation would follow the specifications for insulation work in the Noise Insulation Regulations 1975 (NIR).</p> <p>c) As described in the Funding Statement (Document Reference at section 2.1.1), the scheme costs estimate includes for potential compensation claims as a result of the scheme. This would include, for example, claims under the Land Compensation Act Part 1. National Highways is therefore satisfied that the scheme cost estimate includes for the provision of noise insulation should this be required.</p> <p>d) Given that the noise insulation works identified are outside of the Order Limits, the dDCO does not contain a provision which would enable access to land and/or properties for the purposes of providing noise insulation. The expectation in relation</p>

Number	Directed to	Question	Applicant's Response
		Building Consent on behalf of the affected receptor?	<p>to these works would be that the parties effected would allow entry if they wish to have the insulation installed.</p> <p>e) Noise insulation is not required at any listed buildings. As noise insulation works would be undertaken outside of the dDCO then the Listed Building Consent regime would be applicable in the usual way, if there were any works to listed buildings required.</p>
1.9.6	Applicant	<p>Temporary Noise In paragraph 11.5.6 of ES Chapter 11 [APP-042], explain what is anticipated in using the term “may be temporarily higher” with reference to a duration of time and the level of noise above that predicted.</p>	<p>British Standard 5228-1 provides guidance concerning methods of estimating construction noise levels and assessing their impact on those exposed to it. The metric used in the assessment method is the value of the equivalent continuous A-weighted sound pressure level determined over the applicable assessment period.</p> <p>BS 5228-1 provides examples of methods for assessing significance in Annex E of the British Standard. The method set out in BS 5228 Annex E.3.2 "Example method 1 - The ABC method" has been selected for use by DMRB LA 111. This method requires that potential significance is assessed based on a 12-hour day, 4 hour evening or 8 hour night-time (weekdays).</p> <p>Estimations of construction noise for the scheme have been made over a 12-hour day and 8-hour night as appropriate for direct comparison with the potential significance thresholds from BS 5228 E.3.2. See Table 11.15 of Environmental Statement (ES) Chapter 11 Noise and Vibration (Document Reference 6.2, APP-042) for additional assumptions. They are then further compared with the temporal thresholds set out in paragraph 3.19 of DMRB LA 111 to determine whether they constitute a significant effect. The comment in paragraph 11.5.6 of the ES Chapter 11 Noise and Vibration (Document Reference 6.2, APP-042) is intended to convey the nature of construction works, with varying noise levels throughout each day and varying from day to day and it is not realistic, nor necessary (based on the established assessment procedure), to quantify the highest noise levels that might occur for shorter periods during each assessment period. As noted, the assessment criteria (from BS 5228 relate to thresholds taken over the full day or night-time period).</p>
1.9.7	Applicant	<p>Study Area Is the study area of 300 metres a standard approach for all types of terrain, or do allowances need to be</p>	<p>Construction noise prediction is based on spreadsheet calculations at all receptors according to the methods described in DMRB LA 111 (which refers to BS 5228), but National Highways undertook some additional construction noise modelling as a check for specific receptors, most notably at National Star College. As stated in the ES</p>

Number	Directed to	Question	Applicant's Response
		made to recognise the undulating landscape, rock escarpments and prevailing winds, with the potential for noise to carry, echo or be conveyed over a greater distance?	Chapter 11 Noise and Vibration (Document Reference 6.2, APP-42), LA 111 notes that a study area of 300 metres from the closest construction activity is normally sufficient to encompass potential adverse impacts at noise sensitive receptors, although variations in the study area can be defined for individual projects. BS 5228 (referenced within LA 111) notes that the prediction results should be treated with caution at distances greater than 300 metres.
1.9.8	Applicant	<p>National Star College In paragraph 11.6.10 it states only those receptors within 300 metres are presented in the report. With reference to the National Star College's Relevant Representations [RR-039 and RR-078], could the specific vibration information be published?</p>	<p>The reason for not providing calculated values for vibration sensitive properties beyond 300m (see Design Manual for Roads and Bridges LA 111 para 3.26) is that negligible effects are expected beyond this distance, as noted in paragraph 11.10.70 of the Environmental Statement (ES) Chapter 11 Noise and Vibration (Document Reference 6.2, APP-042).</p> <p>The onset of significant vibration effects for human disturbance is at 1.0mm/s PPV (as identified in Table 11-7 of ES Chapter 11). By way of example, the Peak Particle Velocity (PPV) levels from earthworks (typically worst case 'continuous' vibration source) at Four Winds (Receptor No.6 in Table 11.21 of ES Chapter 11) is predicted to be 0.4 mm/s PPV (not significant). This property lies 270m away from the closest associated vibration intensive road works. This is approximately 210m closer to the scheme works than National Star College (the closest National Star College buildings being around 480m away from the scheme, as stated in paragraph 11.10.36 of ES Chapter 11).</p>
1.9.9	Applicant	<p>National Star College</p> <p>a) With reference to paragraph 11.10.37, what is meant by "construction noise impacts would be applied where it is agreed to be appropriate"?</p> <p>b) Does the DCO, or the EMP [APP-317], contain specific secured provisions for mitigation to the National Star College or are these subjects of ongoing discussions?</p> <p>c) If subject to discussions, can the ExA expect to see a resolution</p>	<p>a) Paragraph 11.10.37 of Environmental Statement (ES) Chapter 11 Noise and Vibration (Document Reference 6.2, APP-42) states that: '...mitigation measures to minimise construction noise impacts [on North Star College] would be applied where it is agreed to be appropriate.'</p> <p>This means that agreement will be reached between National Star College (NSC) and the Applicant as to where there is potential for students to be disturbed by construction noise (as described in paragraph 11.10.37). Additional measures in the form of mechanical ventilation would be provided in relation to spaces within the college that are identified as being particularly noise sensitive. This is because, although construction noise has not been assessed as significant at NSC in the ES Chapter 11 Noise and Vibration (Document Reference, APP-42), it is accepted that NSC is a particularly sensitive receptor.</p>

Number	Directed to	Question	Applicant's Response
		<p>prior to the close of the Examination?</p>	<p>To support these discussions, noise demonstrations have been provided to NSC using simulated audio such that the level of construction noise relative to ambient traffic noise can be heard. Discussions are ongoing with regard to the potential for disturbance from the noise levels experienced in rooms used for particularly noise sensitive purposes. This process will inform decisions as to whether mitigation is appropriate to address any expected disturbance and it is anticipated that agreement will be reached on this matter.</p> <p>b) Commitment NV8 of ES Appendix 2.1 Environmental Management Plan (EMP) (Document Reference 6.4, (APP-317) states that 'The contractor shall offer mechanical ventilation for particularly noise sensitive rooms such that windows can be closed if construction noise is intrusive. This shall be based upon a review, with the College, of the potential for disturbance from construction works at those locations relative to ambient noise sources.' The commitment notes that reviews are ongoing. The EMP is secured by Requirement 3 of the draft Development Consent Order (Document Reference 3.1, APP-022)</p> <p>c) Discussions with NSC are ongoing. National Highways would like to secure agreement on construction noise mitigation requirements before the close of the Examination.</p>
1.9.10	Applicant	<p>Mitigation</p> <p>a) Why are the measures listed below paragraph 11.10.54 not currently committed or secured in the EMP [APP-317]?</p> <p>b) For what reasons would mitigation, designed to improve conditions at noise sensitive receptors, not be implemented?</p> <p>c) With reference to measure NV1 in the EMP [APP-317], why is the contractor being given discretion ("the contractor may offer") in instances where noise exposure exceedances still occur?</p>	<p>a) As stated at the end of paragraph 11.10.57 in Environmental Statement (ES) Chapter 11 Noise and Vibration (Document Reference 6.2, APP-042), these measures are dependent on agreement (i.e. affected properties where residents may choose not to have screens in front of their properties) and the full practicability of these measures needs to be assessed as part of the detailed design process and included in the Section 61 consent. Each measure referred to in paragraphs 11.10.55 to 11.10.57 of Chapter 11 Noise and Vibration would have limited or negligible impact on longer term predicted construction noise levels during the construction programme, particularly at upper floors.</p> <p>b) Reasons for not implementing mitigation would include:</p> <ul style="list-style-type: none"> • limited decibel reduction or long-term benefit during the construction works whilst potentially giving rise to other undesirable consequences for the residents, e.g. loss of view/light; • practicability of installing the mitigation measure e.g. lack of space or the presence of the barrier slowing progress of the works thus elongating the period of impact.

Number	Directed to	Question	Applicant's Response
		<p>d) There appears a tension between EMP paragraph 4.2.1(a) and 4.2.2 insofar as who is responsible for obtaining evidence that noise levels breach the relevant British Standard. Is it the case, as implied in 4.2.2, that members of the public would have to obtain their own evidence and present it to the contractor for consideration as to their eligibility for noise insulation?</p> <p>e) What progress has been made in respect of measures to mitigate the significant effects identified for properties at Stratton and Leckhampton Hill (paragraph 11.10.120 of ES)?</p>	<p>c) This wording reflects the provisions of the Noise Insulation Regulations 1975 which enables the highways authority to carry out or make a grant in respect of insulation works and the Land Compensation Act 1973 which confers a power on highways authorities to provide alternative accommodation. The contractor would therefore have the option to offer either noise insulation or alternative accommodation on behalf of National Highways.</p> <p>d) These paragraphs should be viewed separately. Paragraph 4.2.1 of Environmental Statement (ES) - Appendix 2.1 - Environmental Management Plan (EMP) (Document Reference 6.4, APP-317) is explaining the criteria that will be applied based on predictions and/or measurements undertaken by the contractor to identify where they should exercise their powers under the provisions of the Noise Insulation Regulations or Land Compensation Act.</p> <p>Paragraph 4.2.2 of ES Appendix 2.1 EMP (Document Reference 6.4, APP-317) is setting out that other applications from properties not meeting the stipulated criteria, will be considered based on evidence of special circumstances being provided.</p> <p>Paragraph 4.2.2 ES Chapter 11 Noise and Vibration (Document Reference 6.2, APP-042) is setting out that other applications from properties not meeting the stipulated criteria, will be considered based on evidence of special circumstances being provided.</p> <p>e) Since submission of the DCO Application, National Highways has continued to engage with the Joint Councils on the matter of mitigation for the significant effects identified for properties at Stratton and Leckhampton Hill. National Highways and the Joint Councils have reached agreement on this matter, as set out in Matter Agreed 11.6 in Table 4-1 of the Statement of Common Ground with the Joint Councils, in Appendix A of the Statement of Commonality (Document Reference 7.3 (Rev 1)) submitted at Deadline 1.</p> <p>Matter Agreed 11.6 sets out that National Highways has met with the Joint Councils and Cheltenham Borough Council to discuss this matter in terms of potential mitigation and has also explored opportunities for other forms of mitigation in collaboration with the Joint Councils. In particular, the potential for the removal of the significant effect via a speed limit reduction along the relevant sections of roads</p>

Number	Directed to	Question	Applicant's Response
			<p>has been considered to be the only viable potential mitigation method beyond the noise insulation mitigation already proposed. Through discussions, the Joint Councils has confirmed that mitigation measures beyond those already proposed would be disproportionate to the effect, especially when taking into account the reduction of speed limits would require them to undertake a traffic order under section 84 of The Road Traffic Regulation Act 1984, and because this is a strict legal process which requires speed survey or collision data and statutory consultation (including with the Police), the outcome of this process cannot be pre-empted or guaranteed. As such, the Joint Councils and Highways England agree that speed limit reductions on these roads cannot be relied upon to mitigate the identified noise effect. All other potential forms of mitigation that have been identified and explored have been discarded as being unfeasible or ineffective (this has been captured in a technical note recording the findings).</p> <p>National Highways and the Joint Councils are therefore in agreement that options for mitigating the significant adverse effect at Stratton and Leckhampton Hill have been fully explored and it is concluded that there is not an appropriate measure that can be taken beyond the mitigation already secured through the DCO Application in ES Appendix 2.1 EMP (Document Reference 6.4, APP-317).</p>
1.9.11	Applicant	<p>Operational Vibration Assessment The condition of the road surface is a significant factor in determining the likelihood of ground-borne vibration impacts. Ground-borne vibration is scoped out of the assessment as it is assumed that the new road surface will be adequately maintained to be free of irregularities over the long-term assessment period. Is the maintenance regime secured in order to ensure that ground-borne noise will not become a problem over the lifetime of the Proposed Development?</p>	<p>The potential for ground-borne vibration effects arising from road irregularities is considered to be highly unlikely over the lifetime of the proposed scheme given the undertaker's maintenance responsibilities under the draft Development Consent Order (dDCO) (Document Reference 3.1, APP-022) and the statutory duties applying to publicly maintainable highways.</p> <p>Environmental Statement Chapter 2 The Project (Document Reference 6.2, APP-033), paragraph 2.10.4 notes that "Maintenance activities would be as authorised under the DCO. As required by the EMP, industry standard control measures would be applied and encapsulated in the third iteration of the EMP, the EMP (end of construction). With the implementation of these measures no significant effects are considered likely." Ground-borne vibration was scoped out of the assessment in accordance with the Design Manual for Roads and Bridges (DMRB). DMRB LA 111 paragraph 1.4 states that: "Operational vibration is scoped out of the assessment methodology as a maintained road surface will be free of irregularities. As part of the project design and under</p>

Number	Directed to	Question	Applicant's Response
			<p>general maintenance, so operational vibration will not have the potential to lead to significant adverse effects.”</p>
1.9.12	Applicant	<p>Road Surfacing Paragraph 11.5.10 of Chapter 11: Noise and Vibration [APP-042] states that a lower noise surface would be used on all new and altered roads in the Proposed Development.</p> <p>a) Can the Applicant confirm what further details regarding surfacing will be agreed with Gloucestershire County Council at the detailed design as stated in paragraph 2.6.40 of ES Chapter 2 [APP-033]?</p> <p>b) Would this be a thin surface course system or equivalent?</p> <p>c) Would this be for the entire length of the new A417 including slip roads and roundabouts?</p> <p>d) What other options are there for road surfacing and how do they compare in terms of noise reduction performance (tabulate if necessary)?</p>	<p>a) Paragraph 2.6.40 of Environmental Statement (ES) Chapter 2 The Project (Document Reference 6.2, APP-033) states that “<i>The details of surfacing, signage and other arrangements would be determined with GCC at detailed design.</i>” This is in relation to the repurposing of the existing A417.</p> <p>As per paragraph 3.4.14 of ES Appendix 2.1 Environmental Management Plan (EMP) Annex F Public Rights of Way Management Plan (Document Reference 6.4, APP-323), “<i>Details and specifications including maintenance agreements for substituted and new PRow, including scale, surface materials, access features/means of enclosure and signage would be agreed between Highways England and GCC prior to implementation.</i>”</p> <p>This is also set out in Appendix H Draft Statement of Common Ground with the Walking, Cycling and Horse riding Technical Working Group, as part of the Statement of Commonality (Document Reference 7.3, APP-419).</p> <p>b) Please refer to part a.</p> <p>c) With regards to the surface of the new A417, as detailed within 11.5.10 of the ES Chapter 11 Noise and Vibration (Document Reference 6.2, APP-042), lower noise surface (LNS) road material, would be used for both the entire length of the ‘new’ A417, and along sections of ‘altered’ highway adjoining the mainline (including roundabouts).</p> <p>d) The noise performance of a road surface is characterised by its RSI value. There are a range of noise performances for different LNS materials which are categorised from 0 to 3 in Interim Advice Note (IAN) 154/12 (issued by National Highways, 2012) (Table NG 9/30: Road/Tyre Noise Levels). The RSI values are as low as -3.5 dB(A) describing the noise performance relative to traditional surfacing materials. There are now proprietary LNS with even lower RSIs than the above range shown in IAN 154/12, based on a revised specification for Thin Surface Course System (TSCS). The specific type of LNS to be provided as part of the scheme has not yet been identified. The exact specification of the type of LNS road surface will impact the</p>

Number	Directed to	Question	Applicant's Response
			durability and longevity of the material, and these factors must be taken into account.
1.10 Socio-economic effects			
1.10.1	Applicant	<p>Effects on Residence For those properties listed in Table 12-22 of ES Chapter 12 [APP-043], or indeed other residences within the wider study area, would there be any temporary loss of access to a property (requiring road-plates to be laid) or any displacement of parking (temporary or permanent) during construction or operation?</p>	<p>Under article 15 (temporary stopping up and restriction of use of streets) of the draft Development Consent Order (dDCO) (Document reference 3.1, APP-022), where the undertaker does temporarily stop up, alter, divert or restrict the use of any street, reasonable access for pedestrians going to and from premises must be provided and, where the undertaker is not the street authority, consent from the street authority must be obtained.</p> <p>As set out within commitment PH2 within the EMP (Document Reference 6.4 ES Appendix 2.1, APP-317), where the construction works would affect access or parking arrangements to any of the existing receptors identified in Environmental Statement Chapter 12 Population and human health (Document Reference 6.2 / APP-043), temporary alternative access arrangements would be provided in agreement with the receptor, landowner and/or tenant(s). Alternative access and parking arrangements will be detailed within the Construction Traffic Management Plan to be approved as part of the EMP (construction stage) under Requirement 3 of the dDCO.</p>
1.10.2	Applicant	<p>Employment and Skills Plan</p> <p>a) What is the anticipated total number of workers required during construction and, as a percentage, how many of these would likely be 'imported' from the non-local area?</p> <p>b) Is there a need/ requirement for an Employment and Skills Plan to be adopted in this instance to benefit the local workforce? If not, why not?</p>	<p>a) The assessment in Environmental Statement Chapter 12 Population and Human Health (Document Reference 6.2, APP-043) is in accordance with the Design Manual for Roads and Bridges (DMRB) standard LA 112. It sets out, at a high level, employment and economy matters and assumptions that are relevant to the assessment of likely significant effects on population and human health, including local communities. Paragraph 12.10.26 sets out:</p> <p><i>“Given the geographic location of the scheme and the type/volume of construction skills required, it is anticipated that a proportion of the construction workforce would be ‘imported’ into the area and therefore made up of workers travelling from outside the area and staying locally.”</i></p> <p>Given there will be an imported workforce, notwithstanding the extent being currently unknown, it is reasonable to assume this would create a positive impact on local communities in relation to use of accommodation and services.</p>

Number	Directed to	Question	Applicant's Response
			<p>LA112 does not require provision of the anticipated total number of workers required during construction. Further information on the number of workers can be made available once a contractor is appointed, which is the point at which more certainty can be provided. Because this may not be until after the Examination has concluded, estimated numbers based on other similar schemes could be provided on request.</p> <p>b) At this stage, there is no need/requirement for an Employment and Skills Plan to be adopted. National Highways is a responsible employer, and it helps ensure through its sustainable procurement practices that community benefits and targeted recruitment and training benefits are realised through its delivery of programmes and projects, including the A417 Missing Link. National Highways can provide further information about its tendering process on request. A successful contractor would be required to deliver such benefits and its performance will be carefully monitored and evaluated during construction in accordance with National Highways Key Performance Indicators. Further information on these matters can be made available once a contractor is appointed, when an Employment and Skills Plan or similar may be prepared (this may be after the Examination has concluded).</p>
1.10.3	Applicant	<p>Lighting</p> <p>a) Would any cranes, telescopic boom lifts, piling rigs etc need to be fitted with aviation safety lighting to avoid potential hazards to aircraft? And</p> <p>b) If so has this been assessed in terms of night-time landscape and visual effects?</p>	<p>a) During the construction tall cranes and piling rigs would be required for some aspects of the scheme for temporary periods, including the installation of bridges and underpasses. The operation of such equipment will be a detailed in the EMP (construction stage) and will include the use of aviation safety lighting by the Contractor.</p> <p>Environmental commitment L19 in the EMP (Document reference 6.4, APP-317) sets out the following mitigation to ensure that industry best practice is applied:</p> <p><i>Construction to be carried out using industry best practice, this would include:</i></p> <ul style="list-style-type: none"> <i>Lighting associated with the construction phase would be designed to minimise light pollution at night, whilst being consistent with the requirements of site safety and security. Luminaires should be chosen which are directional and minimise up lighting and skyglow...</i> <p>b) The landscape and visual impact assessment (LVIA) undertaken by the Applicant does assess the likely impacts of the construction phase, including the use of large machinery and tall cranes as listed in ES Chapter 7 Landscape and visual effects</p>

Number	Directed to	Question	Applicant's Response
			<p>[APP-038] at Paragraph 7.8.7 and mentioned in assessment table 7-. Cranes are also mentioned in Table 7-20. The assessment does not specifically assess the use of aviation safety lighting at night-time, due to the infrequent and temporary nature of this type of impact. Subject to appointing a contractor, this would be known at detailed design stage, however at this stage National Highways estimate a duration of 4-24 months subject to the location and nature of works. It is considered that the effect of aviation safety lighting would be immaterial to the overall judgement on landscape and visual effects.</p>
1.10.4	Applicant	<p>Scale of Effect With the rest of the A417 already in dual carriageway, how would the economic growth potential be 'unlocked' in Gloucester/ Gloucestershire through the Proposed Development, involving a 3.4 mile stretch only?</p>	<p>The A417 Missing Link is part of the Government's Road Investment Strategy 2 (RIS2), which identifies parts of the strategic road network which need upgrading to improve safety, connectivity, and reliability for its users. As part of the economic appraisal of the scheme, its impact on the wider economy was assessed and this showed that the scheme will benefit the wider economy. Details on this can be found in the Case for the Scheme (Document Reference 7.1, APP-417) and Transport Report (Document Reference 7.10, APP-426).</p> <p>In particular, the following paragraphs of the Case for the Scheme may be helpful:</p> <p><i>7.3.35 The BCR is a cost-benefit analysis calculation which indicates, in quantitative terms, the overall value for money of a project. The scheme achieves an adjusted BCR of 2.51 when reliability and wider economic benefits are included. This means that for every £1 spent on the scheme, £2.51 is generated in economic, environmental and social benefits. Based on the DfT's Value for Money Framework, the scheme is in the 'medium value for money' category. In economic terms, this indicates that the forecast benefits of the scheme would significantly outweigh its costs.</i></p> <p><i>7.3.36 Besides the economic assessment of the scheme, the need for the scheme to enable strategic growth is evident in local planning policy. The Joint Core Strategy17 plan adopted in 2017 by three local authorities – Gloucester City Council (GCC), Cheltenham Borough Council and Tewkesbury Borough Council (with the support of GCC) – sets out the strategic growth objectives for the wider area. It identifies the need for over 35,000 new homes to be delivered across the three authorities by 2031, including through 7 strategic allocations and associated green belt development. Four of these allocations are located on the eastern and northern fringe of Gloucester, and two further allocations are to the north-west of Cheltenham. Allocations A2 (South Churchdown) and A3 (North Brockworth) are directly bounded by the A417 in the east</i></p>

Number	Directed to	Question	Applicant's Response
			<p><i>of Gloucester city and will deliver 2,600 homes within near proximity to the scheme. The need for increased capacity, reduced congestion and safer journeys on the A417 is therefore situated within this context of significant planned economic and housing growth to the surrounding settlements within the Joint Core Strategy plan area.</i></p> <p><i>7.3.37 The JCS states that the Local Transport Plan is the 'key strategy for delivery of essential transport infrastructure to support the delivery of growth identified through the JCS'. The GCC Local Transport Plan19 identifies the A417 Missing Link project as a priority scheme for 'maintaining a functioning highways network' in the county, within the context of the Plan seeking to create a 'fit for purpose, reliable and efficient transport network that connects communities, employment and services, with minimal congestion and competitive journey time.</i></p> <p><i>7.3.38 Furthermore, the scheme is identified in three Infrastructure Delivery Plans in the region: the Joint Core Strategy IDP (covering TBC, CDC and Gloucester City Council authorities); the Gloucester City IDP; and, the CDC IDP. The latter identifies the A417 as a piece of critical infrastructure required to enable the delivery of growth within the district."</i></p>
1.10.5	Applicant	<p>Community Infrastructure What consideration has the Applicant given to using planning obligations or contributions as part of the Proposed Development to secure benefits to the local communities? (For example, for education, open space, local sourced workforce, apprenticeships, highways, healthcare.) Please explain your intentions in this regard and, if none are proposed or intended, provide justification for the approach and position.</p>	<p>All measures required to mitigate the impacts of the scheme are to be secured through the DCO including the replacement of common land and improvements to public rights of way (PRoW). The Applicant does not consider that the provision of any other community infrastructure is necessary to mitigate against the potential impacts of the scheme, as assessed through the Environmental Statement (Document Reference 6.2, APP-031 to 049).</p> <p>The scheme is considered to provide significant community benefits, for example through its safety improvements, replacement habitat, replacement common land, economic benefits, and enhancements, for example to the Public Rights of Way Network. Outside of the scheme National Highways is seeking additional enhancements to benefit the local community through its Designated Funds programme.</p>
1.10.6	Applicant	<p>Public Footpaths a) Can the Applicant explain how effective reinstatement of</p>	<p>a) Article 13 of Part 3 to the dDCO includes controls for the maintenance of new, altered or diverted streets and other structures. Effective reinstatement of affected PRoW is secured as a result. Environmental Statement (ES)- Appendix 2.1 - EMP Annex F Public Rights of Way Management Plan (Document Reference 6.4, APP-</p>

Number	Directed to	Question	Applicant's Response
		<p>affected public rights of way has been secured in the dDCO?</p> <p>b) What would be the timescale for reinstatement?</p> <p>c) How would it be determined that the affected public rights of way had been reinstated to the same condition and quality for users as was present prior to construction?</p>	<p>323), secured through Requirement 3(e)(v) of Schedule 2 to the dDCO, also provides the following specific measures to effectively reinstate affected PRoW:</p> <ul style="list-style-type: none"> • 3.4.11 – <i>Surfaces would be restored/be to existing condition post construction. Suitable surfaces for different types and classification of routes will be provided, taking into account relevant guidance, for example from the Department for Transport, and British Horse Society with agreements to be made at the detailed design stage with Highways England GCC.</i> • 3.4.14 – <i>Details and specifications including maintenance agreements for substituted and new PRoW, including scale, surface materials, access features/means of enclosure and signage would be agreed between Highways England and GCC prior to implementation.</i> <p>b) An appointed contractor would confirm the details for works to PRoW and will update the PRoW Management Plan with timescales at the detailed design stage.</p> <p>c) ES - Appendix 2.1 - EMP Annex F Public Rights of Way Management Plan (Document Reference 6.4, APP-323) makes the following provisions to determine if an affected PRoW has been reinstated to the same condition and quality for users as was present prior to construction:</p> <p><i>2.2.4 of the PRoW Management Plan: Where PRoWs would be stopped up for construction and subsequently reinstated or diverted, a condition survey would ensure that any reinstated route would be of similar or better quality.</i></p> <p><i>3.4.20 of the PRoW Management Plan: During construction, Highways England would also operate a Community Relations team and contact details would be provided on any signs located along the PRoW network. Concerns around condition can therefore be flagged through this facility and Highways England will explore any short-term reinstatement work where necessary. Any concerns raised would be shared with GCC PRoW Officers.</i></p>
1.10.7	Applicant	<p>Assessment of Effects</p> <p>Has the Gloucestershire Way Long Distance Footpath been omitted in</p>	<p>No, the Gloucestershire Way Long Distance Footpath has not been omitted in error. Environmental Statement (ES) Chapter 12 Population and Human Health (Document Reference 6.2, APP-043) Table 12-16 (Existing PRoW that interact with the scheme) explains how Coberley footpath 16, Cowley footpath 1 and Cowley footpath 3 are part</p>

Number	Directed to	Question	Applicant's Response																																																						
		error from Table 12-27? If not, why does it not feature in the list?	of Gloucestershire Way. The Gloucestershire Way is a long distance footpath. A long distance footpath is not a formal designation. The footpaths that make up the Gloucestershire Way will be diverted under the dDCO as public rights of way pursuant to Article 16 and Part 2 (Highways to be stopped up for which a substitute is to be provided and new highways which are otherwise to be provided) of Schedule 4, in accordance with Annex F Public Rights of Way Management Plan of ES Appendix 2.1 (Document Reference 6.4, APP-323).																																																						
1.10.8	Applicant	<p>Public Rights of Way (PRoW) In paragraph 12.10.126 of ES Chapter 12 [APP-043], could clarity be given in this bullet list to the number of PRoW that would be temporarily diverted (i.e. a breakdown on the 18 PRoW)?</p>	<p>Paragraph 12.10.126 of Environmental Statement Chapter 12 Population and Human Health (Document Reference 6.2, APP-043) refers to 18 public rights of way (PRoW) that would be stopped up with substitutes/diversions provided.</p> <p>Details on these can be found in Environmental Statement - Appendix 2.1 - EMP Annex F Public Rights of Way Management Plan (Document Reference 6.4, APP-323) in Tables 3-1 and 3-2, with the following reference numbers:</p> <table border="1"> <thead> <tr> <th>Count</th> <th>PRoW Ref</th> <th>Location</th> </tr> </thead> <tbody> <tr><td>1</td><td>3</td><td>Badgeworth footpath 78</td></tr> <tr><td>2</td><td>4</td><td>Badgeworth footpath 77</td></tr> <tr><td>3</td><td>5</td><td>Badgeworth footpath 74</td></tr> <tr><td>4</td><td>7</td><td>Badgeworth footpath 126</td></tr> <tr><td>5</td><td>8</td><td>Badgeworth footpath 80</td></tr> <tr><td>6</td><td>9</td><td>Badgeworth footpath 84</td></tr> <tr><td>7</td><td>11</td><td>Badgeworth footpath 86</td></tr> <tr><td>8</td><td>14</td><td>Badgeworth bridleway 87</td></tr> <tr><td>9</td><td>15</td><td>Badgeworth footpath 89 and Cowley footpath 24</td></tr> <tr><td>10</td><td>17, 18, 20</td><td>Cotswold Way National Trail</td></tr> <tr><td>11</td><td>21A</td><td>Coberley footpath 15</td></tr> <tr><td>12</td><td>22 & 25</td><td>Cowley footpath 3</td></tr> <tr><td>13</td><td>23</td><td>Coberley footpath 16</td></tr> <tr><td>14</td><td>30</td><td>Cowley footpath 7</td></tr> <tr><td>15</td><td>32</td><td>Cowley restricted byway 26</td></tr> <tr><td>16</td><td>34</td><td>Cowley restricted byway 36</td></tr> <tr><td>17</td><td>36</td><td>Cowley footpath 22 (northern extent)</td></tr> </tbody> </table>	Count	PRoW Ref	Location	1	3	Badgeworth footpath 78	2	4	Badgeworth footpath 77	3	5	Badgeworth footpath 74	4	7	Badgeworth footpath 126	5	8	Badgeworth footpath 80	6	9	Badgeworth footpath 84	7	11	Badgeworth footpath 86	8	14	Badgeworth bridleway 87	9	15	Badgeworth footpath 89 and Cowley footpath 24	10	17, 18, 20	Cotswold Way National Trail	11	21A	Coberley footpath 15	12	22 & 25	Cowley footpath 3	13	23	Coberley footpath 16	14	30	Cowley footpath 7	15	32	Cowley restricted byway 26	16	34	Cowley restricted byway 36	17	36	Cowley footpath 22 (northern extent)
Count	PRoW Ref	Location																																																							
1	3	Badgeworth footpath 78																																																							
2	4	Badgeworth footpath 77																																																							
3	5	Badgeworth footpath 74																																																							
4	7	Badgeworth footpath 126																																																							
5	8	Badgeworth footpath 80																																																							
6	9	Badgeworth footpath 84																																																							
7	11	Badgeworth footpath 86																																																							
8	14	Badgeworth bridleway 87																																																							
9	15	Badgeworth footpath 89 and Cowley footpath 24																																																							
10	17, 18, 20	Cotswold Way National Trail																																																							
11	21A	Coberley footpath 15																																																							
12	22 & 25	Cowley footpath 3																																																							
13	23	Coberley footpath 16																																																							
14	30	Cowley footpath 7																																																							
15	32	Cowley restricted byway 26																																																							
16	34	Cowley restricted byway 36																																																							
17	36	Cowley footpath 22 (northern extent)																																																							

Number	Directed to	Question	Applicant's Response	
			18	38 Cowley footpath 22 (southern extent)
1.11 Traffic and Transport				
1.11.1	Applicant	<p>Transport Report</p> <p>a) Is there a reason why transport related data and assessment is undertaken within a Transport Report [APP-426] as opposed to be a bespoke chapter within the Environmental Statement and not therefore concluded within the ES?</p> <p>b) Does this reduce the weight that can be given to its findings?</p>	<p>a) The approach taken for this scheme is consistent across all of National Highways Nationally Significant Infrastructure Projects (NSIPs). The effects on the environment of traffic and transport are assessed as part of the environmental factors listed in DMRB LA 104 Environmental Assessment and Monitoring and this states that the EIA must report against the following environmental factors:</p> <ul style="list-style-type: none"> • Air quality • Cultural heritage • Landscape • Biodiversity • Geology and soils • Material assets and waste • Noise and vibration • Population and human health • Road drainage and the water environment • climate <p>National Highways produced a Transport Report (Document Reference 7.10, APP-426) to provide more detailed information on the traffic modelling and economic appraisal of the scheme to supplement the Case for the Scheme (Document Reference 7.1, APP-417). Full technical details of the transport planning works undertaken in relation the scheme are set out in the Combined Modelling and Appraisal (ComMA) Report (Document Reference 7.6, APP-422).</p> <p>Topic assessments within the Environmental Statement (ES), namely air quality, noise and vibration, climate and road drainage and water environment, rely on the traffic data detailed in the Transport Report (Document Reference 7.10, APP-426) and the ComMA Report (Document Reference 7.6, APP-422).</p> <p>b) National Highways is of the view that having a separate Transport Report rather than a bespoke chapter within the ES does not reduce the weight that can be given to its findings and that the assessment remains relevant and valid. The effects on the environment of traffic and transport are assessed as part of the environmental factors listed in DMRB LA104. Traffic and transport are vectors for environmental</p>	

Number	Directed to	Question	Applicant's Response
			<p>effects, they are not themselves elements of the environment which require assessment within an Environmental Statement. Impacts on traffic and transport are assessed in the Transport Report (Document Reference 7.10, APP-426) and the ComMA (Document Reference 7.2, APP-422) Report.</p>
1.11.2	Applicant, GCC, TBC, CDC	<p>General</p> <p>a) Are you satisfied that the traffic modelling and underlying assumptions remain valid and reasonable in the light of the Covid pandemic?</p> <p>b) Please justify and explain your reasoning.</p>	<p>a) National Highways is satisfied that the traffic modelling and underlying assumptions remain valid and reasonable in light of the COVID-19 pandemic, for the reasons given in part b) below.</p> <p>Currently, as of December 2021, it is difficult to forecast the medium and long-term impact that the COVID-19 impact would have on traffic flows and travel patterns. This is due to the pandemic still ongoing and the country needs to return to a level of normality before the impact of COVID-19 on travel patterns can be determined. Even then it may take a while for the impact and medium and long-term travel patterns to become apparent. The economic appraisal is over a 60-year period from the opening year (2026) of the scheme and therefore the medium and long-term travel patterns are of more importance than short-term travel patterns in the scheme appraisal.</p> <p>National Highways believe the medium and long term predictions of traffic growth remain accurate and valid for the appraisal of the scheme based on current evidence indicating that traffic flows have increased as the country comes out of lockdown and that traffic levels have increased since March 2020 and are close to pre-lockdown levels.</p> <p>b) National Highways has undertaken analysis of traffic flow data from permanent counters on the A417 Missing Link between Cowley Lane and the A417/B4070 junction to Birdlip. Traffic data for the period January 2015 to September 2021 has been downloaded for eastbound and westbound directions at this location. Using monthly traffic data from this location, the average daily traffic flows for each month between 2015 and 2019 have been calculated to provide a baseline for comparison to September 2021.</p> <p>The 2015-2019 average westbound traffic flow for September is 14,421 vehicles. The average traffic flow for September 2021 is 13,435 vehicles or 93% of the 2015-2019 September average.</p>

Number	Directed to	Question	Applicant's Response
			<p>The 2015-2019 average eastbound traffic flow for September is 15,562 vehicles. The average traffic flow for September 2021 is 14,377 vehicles or 92% of the 2015-2019 September average.</p> <p>The scheme traffic model has been built and follows the Department for Transport's (DfT) Transport Analysis Guidance (TAG) and information available as of May 2020. TAG requires that two sensitivity tests are undertaken to account for higher and lower than expected growth in traffic. The DfT have indicated that the low growth scenario can be considered as an approximation of impact the COVID-19 pandemic could have on travel patterns and there are fewer trips on the network. The low growth sensitivity test results in an adjusted BCR of 2.38. More details on the low, and high growth, sensitivity tests can be found in section 15.2 of the Combined Modelling and Appraisal (ComMA) Report (Document Reference 7.6, APP-422).</p> <p>With the traffic flows on the A417 Missing Link returning to approximately 92% of the 2015 to 2019 average and the current trend of traffic continuing to increase, National Highways is therefore confident that its medium and long term traffic modelling remains reliable. Even in the event a low growth environment were to emerge, the scheme would continue to deliver a suitable BCR.</p>
1.11.3	Applicant	<p>Cotswold Way National Trial Crossing Explain the rationale as to why the Cotswold Way National Trail crossing of the A417 is significantly less in scale compared to the Gloucestershire Way crossing.</p>	<p>The scale of the crossings is different because the function of the two crossings is different.</p> <p>The function of the Cotswold Way crossing is to mitigate the severance of the Cotswold Way National Trail and to enhance the visitor experience of this long-distance route. The structure could also accommodate seasonal cattle crossings from nearby agricultural holdings, as requested by local farmers. Users of the Cotswold Way National Trail are currently required to cross the Air Balloon roundabout at grade, which typically involves conflicts between pedestrians and vehicles at the junction. Therefore, the Cotswold Way crossing has been designed to carry pedestrians from one side of the A417 mainline to the other. The provision of a large crossing to carry the Cotswold Way National Trail and provide environmental connection across the A417 mainline was considered but ruled out in consultation with the National Trust due to the associated negative environmental impacts on Crickley Hill. This could not be justified when the only mitigation function is to reconnect the Cotswold Way. The location and purpose of the Cotswold Way crossing is agreed with the National Trust as evidenced</p>

Number	Directed to	Question	Applicant's Response
			<p>in the Statement of Common Ground with the National Trust, in Appendix G of the Statement of Commonality (Document Reference 7.3, APP-419).</p> <p>In comparison, the function of the Gloucestershire Way crossing is to carry people, connect grassland habitat and mitigate severance of wildlife movement patterns. The provision of all these functions dictated the scale of the Gloucestershire Way crossing, which is therefore, larger in scale than the Cotswold Way crossing. The location and purpose of the Gloucestershire Way crossing is agreed with Natural England, CCB, GWT, National Trust and Joint Councils as evidenced in the relevant Statements of Common Ground of the Statement of Commonality (Document Reference 7.3, APP-419).</p> <p>The Design Summary Report (Document Reference 7.7, APP-423) provides details on the form and function of the two overbridges.</p>
1.11.4	Applicant	<p>Clearways</p> <p>a) Do additional points need to be added to Sheet 2 of Doc 2.7b (Traffic Regulations Measures Clearways and Prohibitions) so as to split the revocation of clearways on the A417 and A436?</p> <p>b) Does this also give rise to a need to modify Part 7 of the draft Development Consent Order to allow for two entries to reflect the revocation of clearways on the A436, as well as the A417?</p>	<p>a) National Highways agree that additional points need to be added to Sheet 2 of the Traffic Regulations Measures Clearways and Prohibitions (Document Reference 2.7b (Rev 1), AS-042) to split the revocation of clearways on the A417 and a short section of the A436. The updated version will be issued at a future deadline.</p> <p>b) An additional entry will be added to Part 7 of the draft Development Consent Order (dDCO) (Document Reference 3.1, APP-022) to reflect this change. The updated version will be issued at a future deadline.</p>
1.11.5	Applicant	<p>Journey Saving Times</p> <p>a) It says in paragraph 2.2.2 of ES Chapter 2 [APP-033] that delays of 20 minutes or more are being experienced. Where is the proof of this?</p> <p>b) Tables 7-1, 7-2, 7-3 and 7-4 in the Transport Report indicate</p>	<p>a) The reference to a 20 minute delay in paragraph 2.2.2 of Environmental Statement (ES) Chapter 2 The Project (Document Reference 6.2, APP-033) is consistent with previous reports on the need for the scheme, including for example the Technical Appraisal Report (Document Reference 7.9, APP-425). Delays of that length are consistent with the current traffic modelling reported in the Transport Report (Document Reference 7.10, APP-426). National Highways is investigating its records to identify the evidence on which the 20 minute delay was included in those previous scheme reports, and will provide an update to the ExA at Deadline 2.</p>

Number	Directed to	Question	Applicant's Response
		<p>that journey time savings may be in the region of 3-4 minutes and, in some cases, there may not be any savings at all resulting in a journey time increase. Given the delays of 20 minutes currently being experienced, what benefit would truly come from the scheme?</p>	<p>b) The economic appraisal undertaken for the scheme is based on the scheme traffic model. The traffic model is representative of an average peak period (average of 07:00 to 10:00 for the AM and 16:00 to 19:00 for the PM peak) rather than a peak hour model. This means that the journey times (and delays) represented within the model will be lower than those of the peak hour. Tables 7-1 to 7-4 in the Transport Report (Document Reference 7.10, APP-426) show the modelled journey time results for two specific routes that include the scheme for the average peak period. The journey time savings for this modelled period would be between three and four minutes for those travelling eastbound between Cirencester and the M5 and between five and six minutes for westbound. When these journey time savings are applied to the average number of vehicles making these trips each day and then multiplied over the 60-year appraisal period the journey time savings are considerable. Total travel time benefits are £314,313,000, as reported in Table 8-3 in the Transport Report (Document Reference 7.10, APP-426). In addition to journey time benefits, the scheme is forecast to deliver benefits in relation to safety, noise, journey time reliability and wider economic benefits. These are summarised in Table 8-8 of the Transport Report (Document Reference 7.10, APP-426). More details on the economic appraisal approach and results are contained in sections 12 and 13 of the Combined Modelling and Appraisal (ComMA) Report (Document Reference 7.6, APP-422).</p>
1.11.8	Applicant	<p>Public Transport Explain how the Proposed Development has taken into account the existing bus stop in Birdlip and whether any part of the Proposed Development, or any Development Consent Obligations associated with it, would address or improve that bus stop.</p>	<p>The scheme will not affect the existing bus stop in Birdlip and there are no proposals as part of the scheme to improve it. As explained within the Consultation Report (Document Reference 5.1, APP-027), discussions have been held with Birdlip and Cowley Parish Council and Gloucestershire County Council and its relevant officers to discuss how the existing bus stop could be relocated or improved as part of or outside of the scheme. Two key meetings took place to discuss this suggestion and potential ways forward on 29 September 2020 and 23 February 2021. In summary, it was decided by all parties that relocating the bus stop as part of the scheme would not be appropriate at this time. The scheme will not impact the existing bus stop arrangement but has been designed such that it would not prevent a future scenario within which the bus stop and its access is improved or relocated in the future by Gloucestershire County Council or any other third party.</p>

Number	Directed to	Question	Applicant's Response
1.11.9	Applicant	<p>Air Balloon Roundabout Paragraph 7.3.11 of the Case for the Scheme [APP-417] suggests that the main problem in congestion terms is the Air Balloon Roundabout. Paragraph 7.3.56 suggest that localised solutions, focusing on the roundabout were discounted due to concerns over buildability. What concerns, technical or otherwise emerged, would be experienced in terms of buildability and are these concerns fully resolved in the current Proposed Development?</p>	<p>Paragraph 7.3.11 of the Case for the Scheme (Document Reference 7.1, APP-417) identifies that the current Air Balloon Roundabout is not designed to cope with the high volumes of traffic utilising this section of the A417. This leads to congestion and capacity issues at the roundabout which subsequently leads to high journey times and poor journey time reliability.</p> <p>Paragraph 7.3.56 is part of a larger section of the Case for the Scheme (Document Reference 7.1, APP-417) which presents previous studies which considered whether smaller scale interventions could help solve the capacity and congestion issues identified at the Air Balloon Roundabout. Previous studies have identified that where the roundabout has been widened previously, further widening would impact upon designated sites (woodland, cricket pitch). The effect it would have would be limited by capacity on the approach to the roundabout, from the A417 (both directions) and the A436. These would require changes such as widening, again impacting designated sites, and would bring limited benefit in terms of alleviating congestion on a road that handles significantly more traffic than it was designed for.</p> <p>In terms of the concerns raised, the submitted scheme removes the Air Balloon Roundabout from the mainline of the A417 and therefore current problems associated with capacity and congestion issues would also be removed. In addition, buildability advice has been key to the submitted design, and the scheme is designed to modern standards to accommodate the volume of traffic forecast to be utilising the route moving forward. National Highways is therefore confident that the concerns would be fully resolved by the scheme.</p>
1.11.10	Applicant	<p>Additional Crossing – A417 between Bentham Lane and Grove Farm</p> <p>a) With reference to paragraph 6.3.17 of the Statement of Commonality [APP-419], has any further consideration be made to providing an additional crossing to the A417 between Bentham Lane and Grove Farm?</p> <p>b) Would such a crossing be practical either at ground level or via footbridge?</p>	<p>a) Yes, as set out in Appendix H to the Statement of Commonality (Document Reference 7.3, APP-419) (Draft Statement of Common Ground with the Walking, Cycling and Horse riding Technical Working Group) on 18 January 2021 National Highways shared a file note to address the suggestion for an additional crossing to the A417 between Bentham Lane and Grove Farm 'Walking, Cycling and Horse Riding Access across A417 Online Section'. We provide a copy to the Examination at Deadline 1 for convenience (Document Reference 8.8).</p> <p>In summary, the note describes the proposals for walking, cycling and horse riding (WCH) crossings adjacent to Crickley Hill, and provides information used to inform decision making as part of the A417 Missing Link preliminary design. The note considers feedback from stakeholders through the Technical Working Group, within</p>

Number	Directed to	Question	Applicant's Response
			<p>which some members have expressed the need for additional crossing facilities along the A417 at Crickley Hill as part of the scheme.</p> <p>b) The note explains how the provision of pedestrian crossings would require significant engineering works with a major realignment of Dog Lane to the north and disruption for the Flyup 417 Bike Park business to the south. This would also involve additional land take, additional cost and result in additional adverse environmental impacts when compared to the scheme.</p>
1.11.11	Applicant	<p>Construction Effects – Dry-stone Walls</p> <p>a) What proportion of construction traffic movements are anticipated to arise directly in relation to construction of dry-stone walls?</p> <p>b) Will temporary compounds and temporary haul roads be created in order to facilitate or support the construction of the walls?</p> <p>c) If yes to (b), where is evidence that such temporary works have been assessed in the ES?</p>	<p>a) Construction traffic movements in relation to construction of dry-stone walls would be determined at detailed design and controlled by Environmental Statement (ES) Appendix 2.1 EMP Annex B Construction Traffic Management Plan (CTMP) (Document Reference 6.4, APP-319). Annex B CTMP of ES Appendix 2.1 EMP (Document Reference 6.4, APP-319) sets out proposals for construction traffic management including phasing plans and control measures for temporary accesses. This plan will be refined in consultation with the relevant planning authority and approved by the Secretary of State as part of the EMP (construction stage) under Requirement 3. Requirement 3(3) ensures that the authorised development must be constructed in accordance with the approved Construction Traffic Management Plan.</p> <p>b) Yes. All construction and satellite compounds are presented on General Arrangement Plans (Document Reference 2.6a (Rev 1), AS-040). These would facilitate or support the construction of the dry-stone walls.</p> <p>c) All construction and satellite compounds are included in the DCO boundary and assessed in the ES. This is reported in ES Chapter 4 Environmental Assessment Methodology (Document Reference 6.2, APP-035) which states <i>“The study area for each environmental factor incorporates the DCO Boundary as a minimum for the scheme. The EIA and ES is based on the DCO Boundary presented in the DCO Application.”</i></p> <p>ES Chapter 2 The Project (Document Reference 6.2, APP-) at paragraph 2.8.10 confirms that a construction compound was originally to be located next to Cowley junction, but this was relocated as a result of the geophysical survey results and to avoid potential impacts to buried assets. Paragraph 2.9.24 sets out the location of the two main compounds, one being in the adjacent fields to the west bound</p>

Number	Directed to	Question	Applicant's Response										
			<p>carriageway and the other in the adjacent fields to the proposed Cowley junction on the eastbound carriageway.</p> <p>A further compound would be located in fields on the south side of the A417 and additional satellite compounds would be located at Crickley Hill bat underpass, Grove Farm underpass, Cotswold Way crossing, Shab Hill junction, Cowley overbridge, Stockwell overbridge and Barrow Wake car park.</p> <p>The EIA is based on these descriptions.</p>										
1.11.12	Applicant	<p>Construction Traffic Management Plan For table 2-1, add a column indicating the length (duration) of time that the traffic management measures are anticipated to be in place. Also indicate, through colour coding, the sequencing of these works and whether any are concurrent or consecutive.</p>	<p>All programme information in the application is indicative and reflects the buildability advice at the time of submission. The following durations are subject to change when a contractor is appointed.</p> <p>National Highways propose to submit an updated ES Appendix 2.1 EMP Annex B CTMP (Document Reference 6.4, APP-319) in the Examination at Deadline 2.</p> <p><u>Color Coding – Phases identified in the CTMP</u> Phase 1 Phase 2 Phase 3 Phase 4 Phase 5 Phase 6 Phase 7</p> <p>Table 2-1 Indicative length of traffic management</p> <table border="1"> <thead> <tr> <th>Carriageway</th> <th>Works location</th> <th>Traffic management restrictions</th> <th>Length of TM (m)</th> <th>Duration of TM (months)</th> </tr> </thead> <tbody> <tr> <td>Existing A417 Southbound</td> <td>Crickley Hill</td> <td>40mph speed limit with single lane running</td> <td>2.15km</td> <td> Phase 3 – 8 mths Phase 4 - 3 mths Phase 5 – 7 mths Phase 6 – 11 mths Phase 7 – 2 mths </td> </tr> </tbody> </table>	Carriageway	Works location	Traffic management restrictions	Length of TM (m)	Duration of TM (months)	Existing A417 Southbound	Crickley Hill	40mph speed limit with single lane running	2.15km	Phase 3 – 8 mths Phase 4 - 3 mths Phase 5 – 7 mths Phase 6 – 11 mths Phase 7 – 2 mths
Carriageway	Works location	Traffic management restrictions	Length of TM (m)	Duration of TM (months)									
Existing A417 Southbound	Crickley Hill	40mph speed limit with single lane running	2.15km	Phase 3 – 8 mths Phase 4 - 3 mths Phase 5 – 7 mths Phase 6 – 11 mths Phase 7 – 2 mths									

Number	Directed to	Question	Applicant's Response				
			Existing A417 Northbound	Crickley Hill	40mph speed limit with single lane running	2.15km	Phase 5 – 7 mths Phase 6 – 11mths Phase 7 – 2 mths
			A417 Air Balloon Roundabout Southbound	Air Balloon Roundabout	40mph speed limit and restricted lane widths	0.5km	Phase 2 – 4 mths Phase 3 – 8 mths Phase 4 - 3 mths Phase 5 – 7 mths Phase 6 – 2 mths
			A417 Air Balloon Roundabout Northbound	Air Balloon Roundabout	40mph speed limit and restricted lane widths	0.5km	Phase 2 – 4 mths Phase 3 – 8 mths Phase 4 - 3 mths Phase 5 – 7 mths Phase 6 – 2 mths
			A436 Air Balloon Roundabout Eastbound	Air Balloon Roundabout	40mph speed limit and restricted lane widths	0.5km	Phase 2 – 4 mths Phase 3 – 8 mths Phase 4 - 3 mths Phase 5 – 7 mths Phase 6 – 2 mths
			A436 Air Balloon Roundabout Westbound	Air Balloon Roundabout	40mph speed limit and restricted lane widths	0.5km	Phase 2 – 4 mths Phase 3 – 8 mths Phase 4 - 3 mths Phase 5 – 7 mths Phase 6 – 2 mths
			Leckhampton Hill Air Balloon Roundabout both directions	Leckhampton Hill Road	30mph speed limit and restricted lane widths	1km	Phase 4 - 3 mths Phase 5 – 6 mths
			A417 Cowley Junction Southbound	Cowley Junction	40mph speed limit and restricted lane widths	0.8km	Phase 3 – 8 mths Phase 4 - 6 mths

Number	Directed to	Question	Applicant's Response					
			A417 Cowley Junction Northbound	Cowley Junction	40mph speed limit and restricted lane widths	0.8km	Phase 3 – 8 mths Phase 4 - 3 mths Phase 5 – 3 mths	
			Unnamed side road Cowley Junction in both directions	Unnamed side Road	30mph speed limit with restricted lane widths	0.5km	Phase 3 – 8 mths Phase 4 - 3 mths Phase 5 – 3 mths	
			New A436 (carrying A417 Traffic) Southbound	New A436 Roundabout to new Shab Hill Junction	40mph speed limit	1km	Phase 5 – 3 mths Phase 6 – 11 mths Phase 7 – 2 mths	
			New A436 (carrying A417 Traffic) Northbound	New A436 Roundabout to new Shab Hill Junction	40mph speed limit	1km	Phase 5 – 3 mths Phase 6 – 11 mths Phase 7 – 2 mths	
			New A417 Southbound	Crickley Hill	40mph speed limit and contraflow running on new northbound carriageway	3.5km	Phase 6 – 10 mths	
			New A417 Northbound	Crickley Hill	40mph speed limit and contraflow running on new northbound carriageway	3.5km	Phase 6 – 10 mths	
			New A417 Southbound	Crickley Hill	40mph speed limit and contraflow running on new southbound carriageway	3.5km	Phase 5 – 7 mths	
			New A417 Northbound	Crickley Hill	40mph speed limit and contraflow	3.5km	Phase 5 – 7 mths	

Number	Directed to	Question	Applicant's Response				
					running on new southbound carriageway		
			New A417 Southbound	Cowley Junction to new Shab Hill Junction	40mph speed limit single lane running on new southbound carriageway	2km	Phase 5 – 3 mths Phase 6 – 11 mths Phase 7 – 2 mths
			New A417 Northbound	Cowley Junction to new Shab Hill Junction	40mph speed limit single lane running on new northbound carriageway	2km	Phase 5 – 3 mths Phase 6 – 11 mths Phase 7 – 2 mths
1.11.13	Applicant	<p>Embargoes Would or should traffic management measures be removed during Christmas and Easter holiday periods, in addition to purely the bank holiday weekends?</p>	<p>In principle, where feasible and practicable, traffic management would be removed during Bank holiday weekends, Christmas and Easter Holidays. Full details of construction traffic management will be confirmed within the Environmental Statement Appendix 2.1 EMP Annex B CTMP (Document Reference 6.4, APP-319) to be approved as part of the EMP (construction stage) under Requirement 3 of the draft Development Consent Order (dDCO) (Document Reference 3.1, APP-022).</p>				
1.11.14	Applicant	<p>Bus Routes a) Would traffic management measures and/ or diversion routes affect the regularity or reliability of existing bus services on the A417 and, if so, what measures would be used to mitigate the potential effects on these services from customer discouragement/ loss of service? b) Have the bus operators been consulted and commented?</p>	<p>a) National Highways has undertaken a review of the existing bus routes in Gloucestershire, and currently there are no bus routes running on the A417 between the junction with the A46 and the junction with the B4070. The only bus service that currently uses the A417 is the Pulhams Coaches 882 service which uses the A417 between the B4070 junction and Cowley roundabout, and between Duntisbourne Abbots and the A417 junction for Daglingworth.</p> <p>Currently buses are already subject to delays caused by congestion during peak times on the section of the A417 between the B4070 junction and Cowley roundabout. Traffic management measures and/or diversion routes provided for by Annex B CTMP of ES Appendix 2.1 EMP (Document Reference 6.4, APP-319) are unlikely to further affect the regularity or reliability of existing bus services on the A417.</p>				

Number	Directed to	Question	Applicant's Response
			<p>b) As set out in the Consultation Report Appendices (Document Reference 5.2, APP-028 and APP-029) several organisations with an interest in bus routes and services were notified of the 2019 and 2020 statutory consultations, including but not limited to Gloucestershire County Council (GCC), National Express, Community Connexions, the Campaign for Better Transport and the Confederation of Passenger Transport. Of these, only GCC responded to the consultations, as set out in Appendix 7.2 and Appendix 10.2 of the Consultation Report Appendices (Document Reference 5.2, APP-028 and APP-029). Bus operators have not commented on the proposals and as such have not raised any concerns about traffic management measures and/or diversion routes affecting the regularity or reliability of existing bus services as part of the scheme.</p> <p>Annex B Construction Traffic Management Plan (CTMP) of ES Appendix 2.1 EMP (Document Reference 6.4, APP-319) sets out proposals for construction traffic management. This plan will be refined in collaboration with the relevant planning authority (GCC) and local bus operators to ensure any specific construction measures required are appropriately considered. The plan will be approved by the Secretary of State as part of the EMP (construction stage) under Requirement 3. Requirement 3(3) ensures that the authorised development must be constructed in accordance with the approved Construction Traffic Management Plan.</p>
1.11.15	Applicant	<p>Construction Worker Travel Plan</p> <p>a) Would temporary car parks for construction workers be established within each of the identified compounds and, if so, how many spaces would be provided?</p> <p>b) Would construction workers be encouraged to utilise public transport and/ or car-pooling in order to attend the works area?</p> <p>c) Would communal vehicles (LGVs) run from the construction compounds to deliver workers to the relevant section of the</p>	<p>a) Sufficient temporary car parking for construction workers would be established within the identified compounds. Exact numbers of spaces cannot be confirmed at this stage and would be subject to detailed design of the scheme.</p> <p>b) A Construction Worker Travel Plan (or similar) would be developed for the construction phase to encourage construction workers to utilise public transport and car sharing in order to attend the working areas.</p> <p>c) Yes.</p> <p>d) These would be documented in a Construction Worker Travel Plan (or similar) for the construction phase. This will be secured with an update to the Environmental Statement Appendix 2.1 Environmental Management Plan (EMP) (Document Reference 6.4, APP-317).</p>

Number	Directed to	Question	Applicant's Response
		<p>Proposed Development under construction at any given time?</p> <p>d) Do these provisions need to be secured within a Construction Workers Travel Plan?</p>	<p>All site personnel and visitors would receive a site safety induction and environmental awareness training from the contractor that would include site traffic protocols, as per the EMP.</p>
1.11.16	Applicant	<p>Consultation</p> <p>a) Has Gloucestershire Police been consulted over the likely effects of the Proposed Development on traffic and the proposed mitigation measures?</p> <p>b) If so, please provide direction to any responses received.</p>	<p>a) As identified in Appendix 6.1 and Appendix 9.1 of the Consultation Report Appendices (Document Reference 5.2, APP-028 and APP-029 respectively), the Gloucestershire Police and Crime Commissioner was notified of the statutory consultations held in 2019 and 2020, under section 42(1)(a) of the Planning Act 2008 (the Act).</p> <p>In addition, the Gloucestershire Constabulary were notified of the 2019 and 2020 statutory consultations under section 47 of the Act as an additional organisation which may have an interest in or be relevant to the scheme. This is identified in Appendix 6.9 and Appendix 9.8 of the Consultation Report Appendices (Document Reference 5.2, APP-028 and APP-029 respectively).</p> <p>b) The Gloucestershire Police and Crime Commissioner responded to the 2019 statutory consultation, as summarised in Row ID 132 of Table 7.2 in Appendix 7.2 of the Consultation Report Appendices (Document Reference 5.2, APP-029). The Gloucestershire Police and Crime Commissioner did not respond to the 2020 supplementary statutory consultation. The Gloucestershire Constabulary did not respond to either of the consultations.</p> <p>The Gloucestershire Police and Crime Commissioner was notified of the acceptance of the DCO Application in accordance with section 56 of the Act. A Relevant Representation has not been received.</p>
1.11.17	Applicant	<p>Abnormal Indivisible Loads (AILs)</p> <p>The Transport Report does not directly reference movements of AILs. Is it the case that none are anticipated or needed to facilitate construction of the Proposed Development?</p>	<p>The Road Vehicles (Authorisation of Special Types) (General) Order 2003 defines an abnormal indivisible load as:</p> <p><i>a load that cannot without undue expense or risk of damage be divided into two or more loads for the purpose of being carried on a road and that—</i></p> <p><i>(a) on account of its length, width or height, cannot be carried on a motor vehicle of category N3 or a trailer of category O4 (or by a combination of such vehicles) that complies in all respects with Part 2 of the Construction and Use Regulations; or</i></p>

Number	Directed to	Question	Applicant's Response
			<p><i>(b) on account of its weight, cannot be carried on a motor vehicle of category N3 or a trailer of category O4 (or by a combination of such vehicles) that complies in all respects with—</i></p> <p><i>(i) the Authorised Weight Regulations (or, if those Regulations do not apply, the equivalent provisions in Part 4 of the Construction and Use Regulations); and</i></p> <p><i>(ii) Part 2 of the Construction and Use Regulations.</i></p> <p>Part 2 of the Road Vehicles (Construction and Use) Regulations 1986 defines the dimensions of the vehicles.</p> <p>Our interpretation of the regulations is based on the government guidance on 'Transporting abnormal loads', available on the Government website, which states that: An 'abnormal load' is a vehicle that has any of the following:</p> <ul style="list-style-type: none"> • a weight of more than 44,000kg • an axle load of more than 10,000kg for a single non-driving axle and 11,500kg for a single driving axle • a width of more than 2.9 metres • a rigid length of more than 18.65 metres <p>Based on this interpretation, Abnormal Indivisible Loads (AILs) are anticipated to be required to facilitate the construction of the scheme, where the bridge beam lengths are greater than 18.65m or wider than 2.9m.</p> <p>Steel girders are likely to be spliced and connected on site rather than transported as a single element. However, some elements must be transported whole such as Shab Hill junction beams (approximately 19m), and Cotswold Way crossing deck (approximately 5m wide).</p> <p>Based on the preliminary design, AIL's are likely to be required for the Cotswold Way Crossing and Shab Hill underbridge. However, the design does not include any structural elements that are unusual for a scheme of this type and it is anticipated that during detailed design, the designer, contractor, and fabricator will collaborate to define a solution that minimises the amount of AILs required</p> <p>Where AILs are required, the contractor will adhere to the guidance set out by National Highways in the 'Notification requirements or the movement of abnormal indivisible loads or vehicles' guidance document.</p>

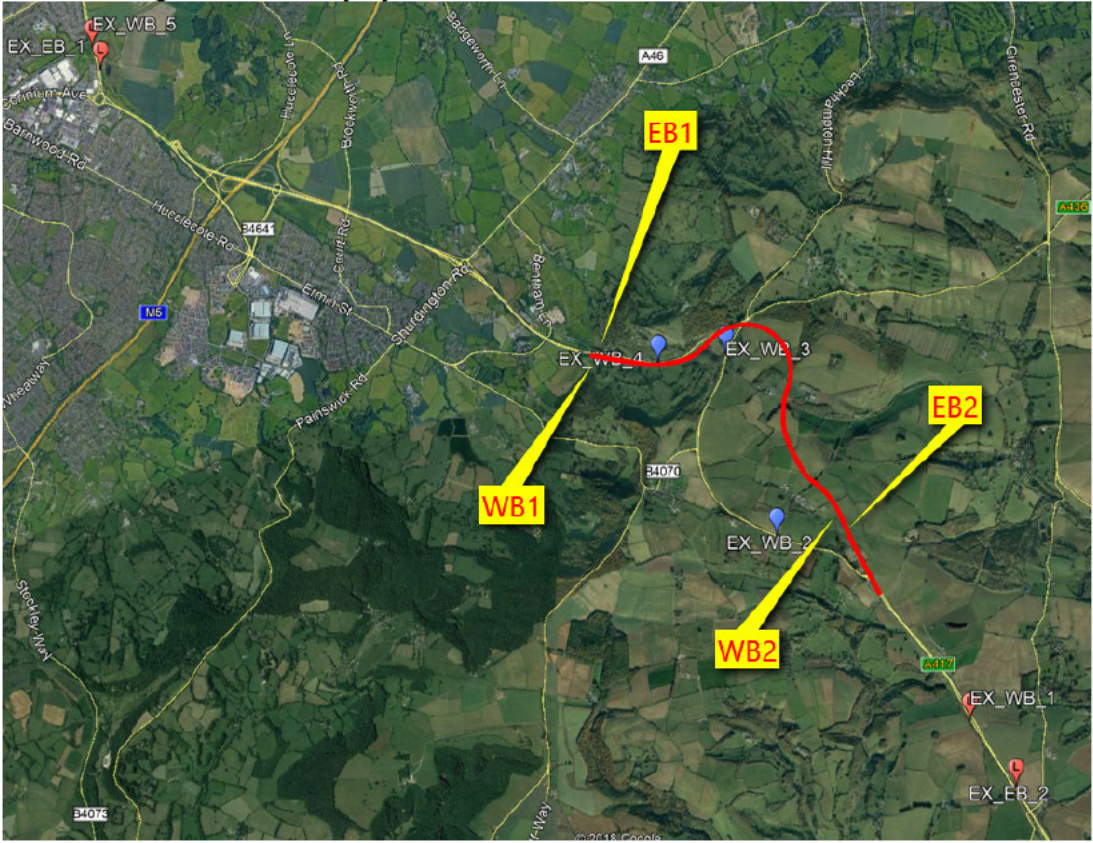
Number	Directed to	Question	Applicant's Response
			<p>All AILs would be detailed and secured by the Construction Traffic Management Plan as part of the EMP (Construction stage) which will be prepared to cater for all movements to and from the scheme.</p> <p>Where AILs are required, they will be transported via the strategic road network and as such we do not anticipate any environmental impacts, which is why they have not been assessed.</p>
1.11.18	Applicant	<p>Emergency Services During the construction phase, what measures would be in place to ensure freedom of movement for the emergency services?</p>	<p>Annex B Construction Traffic Management Plan (CTMP) of ES Appendix 2.1 EMP (Document Reference 6.4, APP-319) describes the measures and processes that would be in place to ensure that the emergency services have the appropriate access and movement during the construction phase. The specific measures required would be detailed in the EMP (construction stage) to be approved under Requirement 3 of the dDCO.</p> <p>Chapter 2 describes how the emergency services would be involved in developing the proposals for incident management - <i>An incident management plan would be developed in conjunction with the DBFO Contractor, Gloucestershire Highways, Highways England Traffic Officers and emergency services.</i></p> <p>Appendix B Table B-1 sets out that the contractor will engage with emergency services in the design of traffic management - <i>Organise an early drive through new traffic management to spot issues, improvements, behaviours and any unintended consequences.</i></p> <p>Appendix C Table C1 – Describes how the TM plan has taken account of the requirement of the emergency services including <i>Process and procedure for allowing blue-light travel through the works/haul routes.</i></p>
1.11.19	Applicant	<p>Daglingworth Notwithstanding the proposed traffic route diversions in the Transport Report, how does the Applicant consider traffic flows and driver behaviour on local roads will change within the parish of Daglingworth during the construction phase of the Proposed Development?</p>	<p>National Highways has reviewed the scheme traffic model, Annex B Construction Traffic Management Plan (CTMP) of ES Appendix 2.1 EMP (Document Reference 6.4, APP-319), and the location of Daglingworth in relation to the scheme.</p> <p>National Highways considers that the impact of the construction of the scheme would be negligible. This is due to Daglingworth being approximately 7 miles (11 kilometres) away from the scheme and therefore being of sufficient distance away that the any construction traffic management measures would not impact on Daglingworth.</p> <p>Annex B Construction Traffic Management Plan (CTMP) of ES Appendix 2.1 EMP (Document Reference 6.4, APP-319) sets out proposals for construction traffic</p>

Number	Directed to	Question	Applicant's Response
			management. This plan will be refined in collaboration with the relevant planning authority (GCC) and will be approved by the Secretary of State as part of the EMP (construction stage) under Requirement 3. Requirement 3(3) ensures that the authorised development must be constructed in accordance with the approved Construction Traffic Management Plan.
1.11.20	Applicant, GCC	<p>Leckhampton Hill Paragraph 7.3.27 of the Transport Report [APP-426] states that Leckhampton Hill would experience an increase in traffic as a result of the Proposed Development. Appendix J to the ComMA report does not provide great detail on this. Provide a Technical Note describing the effects upon traffic flow, queue, delay and overall performance of Leckhampton Hill as a result of the proposed new Ullenwood roundabout junction and whether any effects are considered to be adverse or severe in nature compared to the current baseline.</p>	National Highways is preparing a technical note on Leckhampton Hill as requested and this will be submitted at Deadline 2 of the Examination.
1.11.23	Applicant	<p>Traffic Mitigation</p> <p>a) Has a condition survey been undertaken to assess the quality and condition of all local country roads that are either directly or indirectly affected by the route (during the construction phase)?</p> <p>b) If not, why not?</p> <p>c) If so, are any localised mitigation or improvement measures required to sustain the condition of these roads when accommodating additional diverted traffic?</p>	National Highways is currently in discussion with Gloucestershire County Council in relation to undertaking a condition survey of local roads prior to construction of the scheme beginning. The latest position on this is set out in the Statement of Common Ground with the Joint Councils in Appendix A of the Statement of Commonality (Document Reference 7.3 (Rev 1)) submitted at Deadline 1.

Number	Directed to	Question	Applicant's Response
1.11.25	Applicant	<p>Re-purposed A417</p> <p>a) Paragraph 2.4.5 of the Statement of Reasons [APP-024] refers to the de-trunking of the A417. Can you confirm the length of the de-trunked section in metres?</p> <p>b) The same paragraph refers to 'some lengths' of the existing road would be used for various purposes including a route for 'walkers, cyclists and horse riders', 'lower-class public roads' and 'replacement land'. Please provide a table of the lengths of the various sections of road to be put to the various purposes.</p>	<p>a) Schedule 3, Part 2 of the draft Development Consent Order (dDCO) (Document Reference 3.1, APP-022) sets out the length of de-trunking, with reference to the lengths split across sheets of the Traffic Regulation Measures - De-Trunking Plans (Document Reference 2.8, APP-015). The total length of de-trunking is 3,826m, broken down as follows:</p> <p>498m (point A to point B) 962m (point C to point D) 1791m (point E to point F) 575m (point G to point H)</p> <p>b) Environmental Statement (ES) Chapter 2 The Project (Document Reference 6.2, APP-033) describes the proposals for retaining a length of the existing A417: <i>"The Existing A417 would be retained between the new Cowley junction and the existing Stockwell Farm/A417 junction, to maintain local access for residents and businesses."</i> The length of retained A417 is shown as improved highway on Sheet 5 of the Rights of Way and Access Plans (Document Reference 2.5 Rev 1, AS-039), labelled R. The length of R is set out in the Schedule 4 Part 2 of the dDCO (Document Reference 3.1, APP-022). <u>R=1280m</u></p> <p>ES Chapter 2 also describes the proposals for the Walking, Cycling and Horse-riding proposals along the repurposed A417: <i>"Between the Stockwell Farm junction and the Cotswold Way crossing, a five-metre-wide corridor along approximately 1.68 miles (2.7 kilometres) of the current A417 would be converted into a 'purpose built' restricted byway route for WCH including disabled users and carriages (referred to hereafter as 'Air Balloon Way')."</i></p> <p>The full length of the 'Air Balloon Way' also includes the Cotswold Way crossing and is shown on the Rights of Way and Access Plans (Document Reference 2.5, Rev 1, AS-039), labelled PR9. The length of PR9 is set out in the Schedule 4 Part 2 of the Draft Development Consent Order (dDCO) (Document Reference 3.1, APP-022). <u>PR9=2870m</u></p>

Number	Directed to	Question	Applicant's Response						
			<p>The total length of de-trunking and replacement provision differs slightly due to section of de-trunking overlapping with the new Cowley junction and new A417 mainline, and PR9 extending across the Cotswold Way crossing.</p> <table border="1"> <thead> <tr> <th>Provision</th> <th>Length</th> </tr> </thead> <tbody> <tr> <td>Lower class public road</td> <td>1280m</td> </tr> <tr> <td>WCH route (Air Balloon way)</td> <td>2870m</td> </tr> </tbody> </table> <p>The proposed replacement common land is adjacent the WCH provision and does not provide an additional length.</p>	Provision	Length	Lower class public road	1280m	WCH route (Air Balloon way)	2870m
Provision	Length								
Lower class public road	1280m								
WCH route (Air Balloon way)	2870m								
1.11.27	Applicant	<p>The A435 The Transport Report does not make detailed reference to the A435 or the Seven Springs junction in terms of modelled traffic or how it could/ would perform as an early diversion route to bypass roadworks on the A417. However, the A435 appears briefly in the EMP [APP-317] as a potential route. Can the Applicant explain the extent of assessment that has been undertaken for the A435, whether such an assessment is</p>	<p>Figure 7-1 in the Transport Report (Document Reference 7.10, APP-426) provides Annual Average Daily Traffic (AADT) flows for roads in the vicinity of the scheme. This figure shows that traffic flows on both the A435 and A436 would decrease as a result of the scheme. As the scheme traffic model forecasts that traffic flows on the A435 and A436 would decrease, then it would be expected that the operation of the Seven Springs junction would improve in comparison to the scenario without the scheme.</p> <p>Annex B Construction Traffic Management Plan (CTMP) of Environmental Statement (ES) Appendix 2.1 Environmental Management Plan (EMP) (Document Reference 6.4, APP-319) provides details on the diversion routes to be used during closures of the A417 for construction purposes or if there is an incident on the A417. The proposed diversion routes are existing routes that are currently used by the Design, Build,</p>						

Number	Directed to	Question	Applicant's Response
		<p>necessary and how the Seven Springs junction may perform with increased traffic as a result of the construction period for the Proposed Development?</p>	<p>Finance & Operator (DBFO) Contractor for closures of the A417. The diversion route is dependent on where the closure of the A417 is.</p> <p>Table 3-2 of the CTMP lists the carriageway closures that would occur on the A417 during the construction process. The majority of closures of the A417 during construction would be planned to occur at night, with one weekend closure of the A417 Crickley Hill. Night time flows would be approximately 70% or more lower than weekday PM peak period flows. Weekend flows would also be expected to be lower than weekday peak period flows.</p> <p>When considering that the majority of closures would occur overnight and that traffic would be significantly lower than during weekday peak periods, even with the diversion in place, National Highways considers there is no need to undertake an assessment of the Seven Springs junction.</p>
1.11.28	Applicant	<p>Work No.1(d) What optioneering exercises were undertaken to determine the location and size of the four public lay-bys being provided by the scheme and what advantages do the designed positions have that other locations on the route may not?</p>	<p>The optioneering and development of the lay-by design proposals was undertaken as part of the preliminary design of the scheme. Four public lay-bys are included as part of the scheme design, two on the eastbound carriageway and two on the westbound carriageway.</p> <p>The recommended spacing for non-emergency stopping provision in each direction on dual carriageways set out in Design Manual for Roads and Bridges (DMRB) CD 169 is 2.5km. This recommendation informed the development of the design to include laybys as part of the scheme proposals. The location of the existing lay-bys in the vicinity of the scheme can be seen in Figure 1.</p> <p>The distance between lay-bys on the existing eastbound carriageway of the A417 in the vicinity of the scheme is approximately 9.2 miles/14.8km. On the existing eastbound carriageway there are no lay-bys after the A417 / Corinium Avenue Roundabout until road users reach the lay-by located approximately 2.5km to the south of the scheme. On the westbound section of the A417 there are three lay-bys within the scheme extents. The two proposed westbound lay-bys would serve as replacements for these</p>

Number	Directed to	Question	Applicant's Response
			<p>three existing westbound lay-bys.</p>  <p>Figure 1 Existing and proposed lay-by locations</p> <p>The route is heavily constrained and there are no locations free from constraints that would enable the introduction of lay-bys with merge tapers without departures from standards and undesirable advance signing positions.</p> <p>The requirements and advice set out for siting and frequency of lay-bys set out in DMRB CD 169 covers key areas including:</p>

Number	Directed to	Question	Applicant's Response
			<ul style="list-style-type: none"> • The requirements in relation to the minimum separation distance between lay-bys and junctions in order to provide minimum required weaving lengths. • The requirement that lay-bys shall not be sited on gradients in excess of the desirable maximum value (4% for dual carriageways) • The advice that lay-bys should not be sited on inside of left-hand curve of radius less than the appropriate value for the design speed (2040m for 120kph design speed) • The requirement that lay-bys shall not be sited in outside of right-hand curve of radius less than the appropriate value for the design speed (2040m for 120kph design speed) • Visibility requirements to/from lay-bys. • Signage requirements in advance of lay-bys and associated Emergency Response Telephones. <p>The provision of lay-bys on the scheme was influenced and constrained by a number of site-specific factors including the following:</p> <ul style="list-style-type: none"> • Relatively short scheme length (approximately 5km) which replaces the existing single carriageway with dual carriageway • 8% longitudinal gradient and horizontal curve of radius 510m which, together, represent over half of the scheme length • Existing A417/A46 grade separated junction to the west of the scheme • Proposed Shab Hill grade separated junction located approximately mid-way on the scheme • Proposed Cowley junction located at the eastern end of the scheme. • Proposed / existing Public Rights of Way located either side of the scheme • Additional road safety considerations including ability to provide clear signage for road users and proximity to steep gradient sections of carriageway

Number	Directed to	Question	Applicant's Response
			<p>The four proposed lay-by locations were selected on the basis that they limited the number of the departures from standards required with safety for road users being one of the key design considerations. They have been positioned on relatively low gradient sections of the proposed alignment, located away from the tighter 510m radius curves and the separation distances to the nearest junctions have been maximised.</p> <p><u>Eastbound lay-by provision</u></p> <p>The proposed location of EB1 is considered to be the only feasible position toward the western end of the scheme due to the position of the existing A417/A46 junction and the start of the proposed 8% gradient.</p> <p>Consideration has been given to the provision of a lay-by on the uphill eastbound section of A417 at Crickley Hill. However, this was ruled out for a number of reasons including:</p> <ul style="list-style-type: none"> • Given that the proposed gradient of the A417 at Crickley Hill is 8%, and this far exceeds the desirable maximum, the provision of a lay-by at this location was considered to introduce unacceptable risk with large vehicles trying to accelerate to an appropriate speed to join the main carriageway whilst emerging from any proposed lay-by. • As lay-bys are considered to be junctions for the purposes of highway link design, desirable minimum stopping sight distance needs to be achieved as per paragraph 2.13 of DMRB CD 109. Due to the constraints associated with the proposed geometry this would be difficult to achieve. Furthermore, lay-bys that are located on the outside of a right-hand curve of radii less than 2040m are not recommended which cannot be achieved. • The eastbound diverge to Shab Hill Junction would include a 3.3m wide hard shoulder. This could be used in an emergency situation. <p>To address concerns relating to breakdowns on the 8% gradient widened verges would be provided on Crickley Hill to enable stricken vehicles to pull off the carriageway. The location of EB2 is considered to be the only feasible position toward the eastern end of the scheme due to the position of the proposed Shab Hill and Cowley junctions.</p> <p><u>Westbound lay-by provision</u></p>

Number	Directed to	Question	Applicant's Response
			<p>The location of WB1 is considered to be the only feasible position toward the western end of the scheme due to the position of the existing A417/A46 junction and the start of the proposed 8% gradient.</p> <p>The location of WB2 is considered to be the only feasible position toward the eastern end of the scheme due to the position of the proposed Shab Hill and Cowley junctions. As part of the review of westbound lay-by provision it was noted that the slip roads at Shab Hill would have hard shoulders. These would enable broken down vehicles to be recovered to a place of relative safety before being repaired or towed away.</p> <p>Assessment of lay-by types and size</p> <p><u>Current design proposals</u></p> <p>The four proposed public lay-bys are designed as Type A parking lay-bys with merge tapers in line with the requirements set out in DMRB CD 169 clause 4.2 for dual carriageways with a proposed speed limit greater than 40mph.</p> <p>All four lay-bys would have a total length of 375m which is the maximum length for a Type A with merge taper lay-by, assuming a central bay of 100m in length.</p> <p>To reduce the likelihood of overnight parking and traders it is proposed to apply a Traffic Regulation Order to restrict parking duration to a maximum of 2 hours.</p> <p>Future design development</p> <p>Subject to agreement with National Highways and following discussion with the Safety Engineering and Standards (SES) team, lay-bys EB1, EB2 and WB2 are likely to be changed to Emergency Lay-bys during later design stages. Vehicles would, therefore, only be able stop in the layby because of an emergency. This would mean that the size of the lay-bys would be reduced. Furthermore, restrictions associated with the emergency laybys would be enforceable by the police. An additional benefit of emergency lay-by is that they would minimise criminal and anti-social behaviour. Such changes would not have any impact on the DCO boundary.</p> <p>It is proposed that Layby WB1 would be retained as a parking lay-by. To minimise misuse of the proposed lay-bys measures such as suitable fencing, barriers or walls will be considered at later design stages to discourage users entering/affecting neighbouring land.</p>

Number	Directed to	Question	Applicant's Response
1.11.29	Applicant	<p>Barrow Wake Car Park Provide justification on the design choice of using a roundabout on the B4070 at the entrance to the Barrow Wake car park. Would a smaller priority junction serve the purpose?</p>	<p>Barrow Wake roundabout would provide a safe method of access to Barrow Wake car park as well as helping to reduce the speed of traffic in the vicinity of the junction. A priority junction would have a number of disbenefits including safety and environmental implications.</p> <p>The choice of junction at Barrow Wake was influenced by several factors, however the overriding reason was safe operation. A priority junction was considered as part of an option assessment exercise during design development. However, it was concluded that a small roundabout would provide the safest operational solution by controlling speeds, facilitating a change in direction for the main traffic flow whilst providing an efficient method of access to Barrow Wake.</p> <p>Subsequent discussions with the local authority confirmed this and when considered together with the realigned B4070 it was also concluded that a roundabout would yield several additional benefits over the original proposals including:</p> <ul style="list-style-type: none"> • Eliminating parking on this section of the road • Bringing through-traffic closer to Barrow Wake car park via the roundabout to act as a form of passive surveillance which would discourage anti-social behaviour • Reducing the extent of construction in this location and make use of existing highway • Reducing land take • The roundabout would also act to calm traffic speeds on this section of road as well as deterring use of the road by large goods vehicles <p>As the primary traffic flow would be between Birdlip and Shab Hill, providing a priority junction to facilitate a change in direction on the B4070 would not be acceptable and could not be justified on safety grounds whereas roundabouts are a recognised method of safely providing a change in direction as stated in Design Manual for Roads and Bridges (DMRB) Design Standard CD 116 'Geometric design of roundabouts' Section 2.</p> <p>The alternative junction solution of providing a priority junction access to the car park positioned on the outside of the existing tight radius curve on a through route alignment for the B4070 would also have a number of safety, environmental and landowner disbenefits. Such a layout would not align with the guidance set out in the (DMRB) standard CD 123 'Geometric design of at-grade priority and signal-controlled junctions'. Paragraph 2.1.1 of DMRB CD 123 which states that "Priority junctions should not be located on a sharp curve on a major road." and "The placement of a priority junction on</p>

Number	Directed to	Question	Applicant's Response
			<p>the outside of a sharp curve can result in drivers on the major road misinterpreting the minor road as the ahead direction. Equally drivers on the minor road could misinterpret the layout as drivers on the mainline as having to give way.”</p> <p>In order to facilitate a priority junction, the B4070 alignment adjacent to the car park access would also need to be modified. The desirable minimum radius recommended in DMRB CD 109 is 510m. Adopting this would result in:</p> <ul style="list-style-type: none"> • Increased loss of vegetation in the vicinity of the curve and increased impacts to the SSSI • Increased impact on adjacent land parcels <p>Modification or replacement of the existing bridge structure where the B4070 passes under the A417.</p>
1.12 Water Environment and Flood risk			
1.12.2	Applicant	<p>Drainage</p> <p>a) With reference to Article 4 of the dDCO, who is responsible for maintaining culverts and keeping them clear at all times?</p> <p>b) Is Highways England imposing the responsibility onto existing landowners from whom rights, and land, is being acquired?</p> <p>c) Do the provisions of Article 4 allow the Applicant to interfere with existing private land drainage systems and not be responsible for maintenance and/or replacement of such systems?</p>	<p>a) Article 4 (maintenance of drainage works) of the draft Development Consent Order (dDCO) (Document Reference 3.1, APP-022) regulates the position between the Order and existing responsibilities for maintenance of drainage works, including drainage culverts. It confirms that the dDCO does not affect existing responsibility for the maintenance of any works connected with the drainage of land, howsoever imposed or allocated, unless otherwise agreed in writing between the undertaker and the person responsible.</p> <p>For the purposes of Article 4, “drainage” has the same meaning as in section 72 (interpretation) of the Land Drainage Act 1991, which includes:</p> <ul style="list-style-type: none"> • defence against water (including sea water); • irrigation, other than spray irrigation; • warping; and • the carrying on, for any purpose, of any other practice which involves management of the level of water in a watercourse. <p>Article 4 therefore covers the maintenance of existing drainage culverts, as works connected with the drainage of land. It is intended to ensure that responsibility for drainage works within the Order limits that are unconnected to the scheme are not affected by the dDCO.</p>

Number	Directed to	Question	Applicant's Response
			<p>Where new drainage culverts are to be constructed as part of any highway that will be a trunk road, National Highways will be responsible for maintenance of that culvert as the relevant highway authority pursuant to section 41 (duty to maintain highways maintainable at public expense) of the Highways Act 1980. Article 14 (classification of roads, etc.) and Schedule 3 to the dDCO confirm which roads forming part of the scheme are to become trunk roads.</p> <p>Where new drainage culverts are to be constructed as part of any highway other than a trunk road, the ongoing responsibility for maintaining those drainage culverts is covered by Article 13 (construction and maintenance of new, altered or diverted streets and other structures). Sub-paragraphs (1) and (2) confirm that, where works forming part of the authorised development include the construction, alteration or diversion of highways (other than a trunk road), the affect highway including any culverts laid under it must be maintained by and at the expense of the local highway authority from its completion.</p> <p>Where a private street is constructed, altered or diverted under the dDCO, that street must be maintained by and at the expense of the Applicant for a period of 12 months from its completion and, at the expiry of that period, by and at the expense of the street authority pursuant to sub-paragraph (3) of Article 13. Under the dDCO, "street" has the same meaning as in section 48 (streets, street works and undertakers) of the New Roads and Street Works Act 1991 and includes any tunnels that the street passes over. Drainage culverts constructed as part of a private street under the dDCO would therefore be maintained by the street authority, which under the dDCO has the same meaning as within section 49 (the street authority and other relevant authorities) of the New Roads and Street Works Act 1991. Where a street is not a maintainable highway, the street authority is the street managers. Street managers means "the authority, body or person liable to the public to maintain or repair the street or, if there is none, any authority, body or person having the management or control of the street."</p> <p>Where National Highways are delivering new drainage works that will not form part of a highway or street on land held by National Highways, the protective provisions for the protection of the Environment Agency in Part 3 of Schedule 8 to the dDCO ensure that such works will be maintained by National Highways for a period of 12 months following completion. Paragraph 25 of Schedule 8 provides that on the</p>

Number	Directed to	Question	Applicant's Response
			<p>expiry of the 12 month maintenance period responsibility for maintenance will revert to the highway authority of the highway to which the specified work relates.</p> <p>b) The dDCO does not impose responsibility for maintenance of drainage culverts except in accordance with the provisions detailed in part a) to this response.</p> <p>c) Where National Highways undertakes improvements to existing drainage works on third party land under the dDCO, ongoing maintenance responsibilities for those drainage works are not affected by the dDCO. However, the protective provisions for the protection of the Environment Agency in Part 3 of Schedule 8 to the dDCO ensure that those works will be undertaken in accordance with plans to be approved by the Environment Agency (under paragraph 22) and that National Highways must make good any impairment or damage to the drainage works caused by any work or operation authorised by the dDCO (under paragraph 26). Any landowners with maintenance responsibilities for existing drainage works affected by the scheme would also have the protections afforded to private landowners under property law, in addition to the right to compensation in respect of compulsory acquisition under the dDCO, if relevant.</p>
1.12.3	Applicant, Environment Agency	<p>Scope of Assessment</p> <p>a) Provide an overview of the 'complexities' of the hydrogeological regime in the study area and why these complexities present conditions that are 'beyond the scope' of the EIA, as referred to by the Applicant in paragraph 13.4.49 of ES Chapter 13 [APP-044].</p> <p>b) Are the effects of the Proposed Development on the hydrogeological regime unquantifiable or unknown as a result?</p>	<p>a) The complexities of the hydrogeological regime are associated with a number of geological processes, which have influenced the rock mass characteristics of the geology within the scheme area. Rock mass discontinuities associated with bedding, joining, faulting and cambering processes on the escarpment edge are further modified by dissolution of limestone (karstic processes).</p> <p>The stratigraphy of the scheme area is complicated by the presence by a number of significant faults. The locations of the main faults have been confirmed by the completed ground investigations. The ground investigations undertaken have also identified additional faults that had not been recorded on published geological information and there always the potential for other minor faults to be present.</p> <p>As discussed in the ES Chapter 9 Geology and soils (Document Reference 6.2, APP-040) cambering processes are known to have modified the rock mass characteristics with significant open discontinuities (gulls) identified in the scheme area, which could present pathways for groundwater flow. Features such as voids and fissures created or enhanced by dissolution of limestone have also been identified during completed scheme specific ground investigations.</p>

Number	Directed to	Question	Applicant's Response
			<p>Full mapping and identification of individual discontinuities, gulls, faults and karstic features within the geology underlying the scheme is practically not feasible with available surveying techniques. However, as detailed in ES Appendix 13.7 HIA (Document Reference 6.4, APP-403), the modelling undertaken takes account of the presence of significant interconnectivity within and between the strata present beneath the site as a result of these processes and features. The conceptual modelling undertaken is considered to provide a sufficient level of detail to robustly assess and manage the risk associated with these features and processes.</p> <p>Therefore, creation of a three-dimensional numerical model of the hydrogeological regime within the scheme area is not considered to be appropriate or practically feasible and has not been prepared. This was agreed with the Joint Councils and the Environment Agency as summarised in the Statement of Commonality (Document Reference 7.3, APP-419).</p> <p>b) As presented in ES Appendix 13.7 Hydrogeological Impact Assessment (HIA) (Document Reference 6.4, APP-403) the assessments are based on analytical and two-dimensional conceptual models, and where required, are quantifiable, for example, the assessment of impact on groundwater features from dewatering. The assessments have been informed by data obtained through scheme specific ground investigations such as permeability of strata and groundwater levels. This has been agreed with Environment Agency in the draft Statement of Common Ground with the Environment Agency, in Appendix B of the Statement of Commonality (Document Reference 7.3, APP-419).</p> <p>The assessments are considered to represent a 'reasonable worst-case' and are based on conservative inputs derived from available field or desk study data and published research literature relevant to the study area.</p>
1.12.4	Applicant	<p>Assessment of Effects Clarify whether a worst-case scenario has been adopted when assessing the impacts of the Proposed Development on flooding, or changes to surface water flow and, if so, justify the adopted worst-case scenario assessed.</p>	<p>Hydraulic modelling was undertaken to demonstrate the potential impact the scheme would have on existing fluvial flood risk. This is reported in the Flood Risk Assessment (FRA) in Environmental Statement (ES) Appendix 13.3 Flood Risk Assessment (Document Reference 6.4, APP-399), which considers a range of return period events along with allowances for climate change. These are documented in Table 6-1 Flows for the tributary of Norman's Brook for a range of return periods, ranging from a 1 in 1-year to a 1 in 100-year + climate change. This represents the worst case scenario. The</p>

Number	Directed to	Question	Applicant's Response
			<p>FRA uses 40% uplift to peak rainfall as its climate change allowance, as the modelled area is considered to be a small catchment area (less than 3km²).</p> <p>These scenarios were adopted in line with the current guidance referenced and included within the assessment within ES Chapter 13 Road Drainage and the Water Environment (Document Reference 6.2, APP-044).</p>
1.12.6	Applicant	<p>Tracer Test What importance, if any, are the results of the tracer test reported in paragraph 13.7.25 insofar as they prove a differential connection to that stated in the WFD water body delineation?</p>	<p>The publicly available data was superseded by the data collected to inform the DCO Application. The Tracer Test showed that the watercourse reported on within Environmental Statement (ES) Chapter 13 Road Drainage and the Water Environment (Document Reference 6.2, APP-044) as the Unnamed tributary to Norman's Brook flowed into Norman's Brook Water Framework Directive (WFD) catchment, rather than Horsbere Brook WFD catchment as displayed on the Environment Agency's Catchment Explorer mapping and within WFD catchment datasets. Therefore, the scheme has the potential to impact a different catchment than that shown by the aforementioned publicly available data.</p> <p>The sensitivity of the watercourse within the ES Chapter 13 Road Drainage and the Water Environment (Document Reference 6.2, APP-044) was derived from the watercourse being connected to Norman's Brook WFD catchment, and the impact assessment methodology applied to the feature. This has resulted in changes to the catchment area size and mitigation for potential impacts on the wider Norman's Brook catchment. The general approach has been agreed with the Environment Agency and the Joint Councils as summarised in the Statement of Commonality (Document Reference 7.3, APP-419).</p>
1.12.10	Applicant	<p>Drainage a) ES Chapter 13 [APP-044] does not appear to specifically reference the effects of temporary works compounds on surface water or hydrology. Provide evidence of where the effects are considered and what, if any, mitigation applies to these. b) Relative to paragraphs 13.9.14ff, are the number of drainage</p>	<p>a) Effects of temporary works compounds on surface water and effects of temporary works compounds on surface water and groundwater are considered within the construction sub-section of section 13.8 Potential Impacts of ES Chapter 13 Road Drainage and the Water Environment (Document Reference 6.2, APP-044) and associated ES Appendix 13.9 Non-significant effects (Document Reference 6.4, APP-405) considers activities that may occur during construction including temporary compounds.</p> <p>Mitigation specifically in relation to works compounds is detailed in in ES Appendix 2.1 Environmental Management Plan (EMP) Annex G Ground and Surface Water Management Plan (Document Reference 6.4, APP-324)</p>

Number	Directed to	Question	Applicant's Response
		<p>basins shown on the Works Plans indicative or actual?</p> <p>c) What justification is there for the location and number of basins shown?</p>	<p>Effective delivery of the measures set out in ES Appendix 2.1 EMP (Document Reference 6.4, APP-317) would be monitored during the construction phase.</p> <p>b) The drainage basins shown on the Works Plans (Document 2.4 Works Plans (AS-038) are not indicative, they are based on preliminary design work. The preliminary design has taken account of hydraulic design requirements and topography but may be subject to some design refinement if required at the detailed design stage.</p> <p>c) The design basis for the basins is described in Section 4.6 and Section 6 of ES Appendix 13.10 Drainage Report (Document Reference 6.4, APP-406). The basins are designed to manage surface water flood risk up to and including the 1 in 100 year event with allowance for climate change as required by national and local planning policy. They also have a function in removal of pollutants prior to discharge to surface or groundwaters. The strategic locations are generally dictated by topography and the vertical alignment of the new road and immediately upstream of an outfall to a watercourse or dry valley. The locations are designed to replicate wherever possible existing natural catchments and surface water flow paths and minimise the impact on the receiving water environment.</p>
1.12.11	Applicant	<p>Climate Change</p> <p>a) In respect of high precipitation risks reported in table 14-20, what would the designed mitigation and management measures be for ensuring that underpasses and tunnels (the effective tunnel created under the Gloucestershire Way green bridge) were protected from flooding and that anyone trapped by flooding in such areas could be safely evacuated?</p> <p>b) How would surface water run-off from the green bridges be managed and diverted into available watercourses given the impermeable nature of their constructed bases?</p>	<p>It is understood that this refers to Table 14-20 of ES Chapter 14 Climate (Document Reference 6.2, APP-045).</p> <p>a) The highway drainage design addresses the risks of extreme weather events and includes allowances for climate change over the lifetime of the asset. Flood risk both within the site and outside the site is assessed up to and including the 1 in 100 year return period event with a 40% allowance for climate change in accordance with national planning policy. For more details refer to ES Appendix 13.10 Drainage Report (Document Reference 6.4, APP-406) and ES Appendix 13.3 Flood Risk Assessment (Document Reference 6.4, APP-399).</p> <p>The design also considers and makes allowance for the routing of flood water in an exceedance event (either due to an extreme weather event beyond the design event or a blockage). This is good engineering practice – refer to CIRIA guidance: Designing for exceedance in urban drainage - good practice (C635).</p> <p>The Grove Farm access road that would be running through the Grove Farm underpass and the Shab Hill junction link road that would be running through the Shab Hill junction underbridge would have a continuous longitudinal fall from one</p>

Number	Directed to	Question	Applicant's Response
			<p>side to the other, so there would be no low points that could be vulnerable to flooding.</p> <p>Similarly, the Crickley Hill bat underpass would fall from north to south, towards the tributary of Norman's Brook. There is a minor risk of the underpass ponding at the south approach should water back up from the Norman's Brook watercourse due to a blockage and/or exceptional weather events. However, this would only be a risk to those maintaining or inspecting the structure as lockable gates would be provided at both entrances to ensure there is no public pedestrian access (structure will be used exclusively by bats).</p> <p>The Gloucestershire Way crossing is sited on a steep section of highway with a continuous slope and no low point where water would gather in the event of a blockage of drainage systems, so there is minimal risk of a person or vehicle being trapped at this location.</p> <p>The Applicant notes that the Gloucestershire Way crossing is an overbridge and not a road tunnel (DMRB CD 352 defines a road tunnel as a subsurface highway structure enclosed for a length of 150m, or more, measured along the centre line of the soffit), so the special safety, evacuation, ventilation and fire safety measures required for road tunnels do not apply at this location.</p> <p>b) The crossings that will be planted as part of the scheme will include:</p> <ul style="list-style-type: none"> • Gloucestershire Way crossing • Cowley overbridge • Stockwell overbridge <p>The Gloucestershire Way crossing will have a longitudinal fall with a high point at the pier locations. The bridge would therefore drain freely from the piers towards both abutment ends. A drainage layer would be provided above the reinforced concrete deck slab which would collect the water absorbed by the soil layer. Drainage channels would be provided transversely and longitudinally to collect the water from the drainage layer. The drainage system would be extend beyond the back of the abutments and connect to the adjacent land drainage ditches.</p> <p>On Cowley overbridge, water absorbed by the soil in the soft verge would be collected by perforated drainage pipes that would be placed at the low side of the</p>

Number	Directed to	Question	Applicant's Response
			<p>soft verge. Longitudinal subsurface drainage within the hard verge and carriageway areas would collect any water penetrating the road/verge surface. This system, typically comprising perforated subsurface pipes, would pass through the back of the abutments and connect to the adjacent highway drainage ditches.</p> <p>On Stockwell overbridge, water absorbed by the soil in the soft verges and the gravel track would be collected by perforated drainage pipes placed at the low sides of the verges and gravel track. This system typically comprising perforated subsurface pipes, would pass through the back of the abutments and connect to the adjacent highway drainage ditches.</p>
1.12.13	Applicant, GCC	<p>Existing A417 Would there be any benefit, considering climate change, in retaining the existing drainage features under the repurposed A417 in assisting with land drainage or surface water attenuation?</p>	<p>Most of the existing road corridor is served by a mixture of gullies and filter drains that connect to soakaways. The existing impermeable pavements and associated positive collection systems (road gullies and connecting pipes) would be largely removed and replaced with soft landscaping which will facilitate natural infiltration of rainfall into the ground, promote evapotranspiration and greatly reduce volumes of surface water run-off. Filter drains may be retained but disconnected so they act as soakaways. Any residual surface water would continue to pass to the existing soakaways, which would be retained. The combined effect of these measures would be to reduce surface water run-off and hence the risk of flooding to communities lower down the catchment.</p>
1.12.14	Applicant, GCC	<p>Finished Road Surface Would any part of the Proposed Development be at risk from the pooling or puddling of surface water and, if so, how would the drainage of these areas be managed so as to lower the risk of aqua-planing based accidents?</p>	<p>The detailed design of the scheme would be undertaken by a competent designer procured by National Highways. National Highways tender projects and frameworks for professional services, including the Collaborative Delivery Framework and the Regional Delivery Partnerships framework, utilised for projects like the A417 Missing Link. These require bidding companies to provide assurances and undertakings to produce work to the quality standards set out in relevant regulations, standards or guidance (e.g. Design Manual for Roads and Bridges, Construction (Design and Management) Regulations (2015)).</p> <p>National Highways operates a robust assurance process to ensure work is produced to standard, and in accordance with contract.</p> <p>The scheme would be designed in accordance with the Design Manual for Roads and Bridges with any relaxations or departures from standards requiring approval from National Highways Safety Engineering and Standards team. This would include the design of alignments to avoid the creation of flat spots, and 3D modelling of</p>

Number	Directed to	Question	Applicant's Response
			<p>carriageway levels to identify and analyse low spots, long flow paths and changes in carriageway crossfall to prevent standing surface water in traffic lanes and minimise the risk of aquaplaning accidents.</p> <p>Independent Stage 2 and 3 Road Safety Audits will be completed throughout the detailed design phase to identify operational risks.</p> <p>Technical assurance and supervision during the construction phase would be required before the road becomes operational and corrective actions will be taken if required.</p> <p>Where low spots or other areas of highway at an elevated risk of flooding are identified, the design would incorporate features to mitigate these risks. This would typically comprise sizing the drainage system for higher level of performance than the minimum required by design standards (higher return period rainfall events), and the inclusion of additional redundancy (additional gullies or outlets) to provide alternative routes for water in the event of blockage).</p>
1.12.15	Applicant	<p>Private Water</p> <p>a) Would the Proposed Development result in the disruption of any private water supplies used for agricultural purposes (including irrigation and water for animals) or to private residential properties?</p> <p>b) If so, what alternative arrangements (e.g. tankering) are proposed to ensure water supplies would be maintained for the duration of any disruption and how are these secured in the dDCO?</p>	<p>a) As outlined in section 13.4 Assessment Methodology of Environmental Statement (ES) Chapter 13 Road Drainage and the Water Environment (Document Reference 6.2, APP-044), consultation has been undertaken to identify unlicensed abstractions. Paragraph 13.7.123 of that chapter confirms that there are no licensed private water supplies within the study area.</p> <p>As the abstractions are unlicensed no publicly available records are kept as to the quality or detailed location of the source of the supply or any associated infrastructure. Paragraph 13.7.60 of Environmental Statement (ES) Chapter 13 Road Drainage and the Water Environment (Document Reference 6.2, APP-044) notes that there may be potential for further unlicensed abstractions from watercourses within the study area for the scheme.</p> <p>b) Whilst there are no licensed private water supplies within the study area, as mentioned in Paragraph 13.7.60 of ES Chapter 13 Road Drainage and the Water Environment (Document Reference 6.2, APP-044), should information on unlicensed supplies become available, individual risk assessments will be undertaken to assess potential impact and identify specific mitigation, where required. Based on the information that is available, all identified required diversions have been agreed as set out in the Statement of Commonality Table 7-1 (Document Reference 7.3, APP-419)</p>

Number	Directed to	Question	Applicant's Response
1.12.16	Applicant	<p>River Dunt The Relevant Representation from Councillor Julia Judd [RR-023] references effects on aquifers at Seven Springs in Andoversford, that feeds the River Dunt. Apart from a mention (of Seven Springs) at paragraph 13.7.31 in ES Chapter 13 [APP-044], the cited water environment does not feature in the ES. Explain the relevance and importance of the River Dunt and its contributing features to the Proposed Development and what, if any, effects are predicted upon it.</p>	<p>The River Dunt (officially named the Daglingworth Stream) and its catchment is located outside the study area as defined in Environmental Statement (ES) Chapter 13 Road Drainage and the Water Environment (Document Reference 6.2, APP-044). The source of the Daglingworth Stream is located approximately 5km south of the scheme. It is a tributary of the Churn River with confluence in Cirencester, approximately 17km south of the scheme. It is not considered that there is groundwater connectivity between the source of the stream and the scheme.</p> <p>Seven Springs is located outside the study area, approximately 4km to the north-east of the scheme. The source of the Churn River is located in Seven Springs. The assessments consider two unnamed tributaries of the Churn River, which are within the study area.</p> <p>To clarify, paragraph 13.7.31 refers to the number of springs identified for monitoring but not by name. Based on the Daglingworth Stream and the source of the Churn being located outside the study area and lack of groundwater connectivity with the scheme, no monitoring of these features is being undertaken.</p> <p>Both waterbodies are located within the same river basin district – the Thames. The Thames Water Framework Directive (WFD) groundwater catchment corresponds with the Thames river district. It comprises the Principal aquifers of the Great Oolite and Inferior Oolite limestones. As presented in ES Chapter 13 Road Drainage and the Water Environment the scheme would have a neutral to slight adverse impact during construction and operation on these aquifers, which is not significant.</p>
1.12.17	Applicant	<p>Environmental Permits ES Chapter 13 [APP-044]: Road Drainage and the Water Environment identifies that Environmental Permits for dewatering or discharge of waters may be required. Can the Applicant confirm if Environmental Permits for dewatering or discharge of waters will be required and what progress has been made towards securing any such permits?</p>	<p>As outlined within the Consents and Agreements Position Statement (Document Reference 7.2, APP-418), National Highways is in discussions with the Environment Agency (EA) in relation to the disapplication of the following permits:</p> <ul style="list-style-type: none"> • Water Discharge Activities – Permit to discharge to surface water and/or groundwater under Regulation 12 of the Environmental Permitting (England and Wales) Regulations 2016 • Water Abstraction Licence – Abstraction of water under sections 24 and 25 of the Water Resources Act 1991 <p>Discussions have been positive to date and National Highways has provided the EA with examples of where this approach has been taken on other Nationally Significant</p>

Number	Directed to	Question	Applicant's Response
			Infrastructure Projects (NSIPs). Should the EA agree to the disapplication of the above, provisions, permits and licenses would not be required.

Appendices

Appendix A Natural England's response to HRA Screening Report letter

Date: 01 April 2021
Our ref: 348579
Your ref: None



Luke Casey
Arup
The Arup Campus
Blythe Gate
Blythe Valley Park
Solihull
West Midlands
B90 8AE

Customer Services
Hornbeam House
Crewe Business Park
Electra Way
Crewe
Cheshire
CW1 6GJ

T 0300 060 3900

BY EMAIL ONLY

Dear Mr Casey,

**A417 Missing link
Draft Habitats Regulations Assessment Screening and Statement to Inform Appropriate
Assessment**

Thank you for your consultation on the most recent draft of the Habitat Regulations Assessment (HRA) Screening Report and the Statement to Inform Appropriate Assessment for the A417 Missing link Nationally Significant Infrastructure Project (NSIP).

Background

We were consulted on your draft HRA in April 2020, and at that stage confirmed that we were in agreement that the Wye Valley and Forest of Dean Bat Sites SAC and the Severn Estuary SAC/SPA/Ramsar site could be screened out from further assessment. Cotswold Beechwoods SAC was taken forward for further assessment with regard to air quality and potential impacts on recreational pressure. We also advised that recreational pressure was considered with regard to North Meadow and Clattinger Farm SAC.

We were reconsulted in January 2021. We advised that we agreed with the conclusion of no likely significant effects on North Meadow and Clattinger Farm SAC as a result of any increased recreational pressure.

With regard to the Cotswold Beechwoods SAC, we advised that whilst we agreed with the conclusions reached, further data should be included to demonstrate the conclusions with regard to air quality, and that the work undertaken on recreational pressure would be more appropriately presented as an Appropriate Assessment.

Cotswold Beechwoods SAC

Comments on the HRA Screening Report 08.03.21

We welcome the inclusion of more data on air quality, including the additional transect points described and the summary of change in Nitrogen deposition in Appendix E. Natural England agrees with the conclusion of no likely significant effects.

Comments on the draft Statement to Inform Appropriate Assessment 08.03.21

We welcome the re-packaging as a Statement to Inform Appropriate Assessment (SIAA). We agree with the conclusion reached in the SIAA that there will be no adverse effects on the Cotswold Beechwoods SAC due to changes to recreational pressure, either alone or in combination with other plans and projects.

Paragraph 4.4.4 refers to the 10km Impact Risk Zone (IRZ) for recreational pressure on the Cotswold Beechwoods SAC, published on Magic. Natural England's IRZ's are buffers designed to trigger consultation. They do not necessarily mean that there is or is not a likely significant effect. In this case the IRZ predates the recreational pressure survey work undertaken for the Cotswold Beechwoods. For the sake of correctness it would be better to refer to the 15.4km Zone of Influence that has been derived from the survey work. The survey report is available via Stroud DC website – [REDACTED]

If you have any queries relating to the advice in this letter please contact me on 020 802 60955.

Yours sincerely

Hayley Fleming
Senior adviser, West Midlands Area Team

Appendix B Air Quality Monitoring Data

Table 1 Details of PM₁₀ and PM_{2.5} local authority monitoring sites

Local authority and ID	Site name	Site classification	National grid reference		In AQMA (Y/N)
			X	Y	
Stroud Hardwicke	Hardwicke	Suburban	380203	212842	N
Stroud Haresfield	Haresfield	Rural	381324	210015	N

Table 2 Local authority monitoring results for PM₁₀

Local authority and ID	Site name	Annual mean PM ₁₀ (µg/m ³)				
		2015	2016	2017	2018	2019
Stroud Hardwicke	Hardwicke	N/A	N/A	N/A	9.9	10.1
Stroud Haresfield	Haresfield	N/A	N/A	N/A	9.9	8.6

Table 3 Local authority monitoring results for PM_{2.5}

Local authority and ID	Site name	Annual mean PM _{2.5} (µg/m ³)				
		2015	2016	2017	2018	2019
Stroud Hardwicke	Hardwicke	N/A	N/A	N/A	7.1	6.4
Stroud Haresfield	Haresfield	N/A	N/A	N/A	7.1	5.8

Table 4 Predicted PM_{2.5} background pollutant concentrations for 2018

Local Authority	Annual mean PM _{2.5} concentration (µg/m ³)		
	Max	Min	Average
Cheltenham Borough Council	10.3	8.0	9.2
Cotswold District Council	10.4	7.7	8.4
Gloucester City Council	11.1	8.4	9.8
South Gloucestershire District Council	10.9	7.4	8.2
Stroud District Council	10.6	7.5	8.3
Swindon Borough Council	11.3	8.4	9.4
Tewkesbury Borough Council	10.7	7.9	8.6
West Berkshire Council	11.5	8.3	9.2
West Oxfordshire District Council	11.1	8.2	9.1
Wiltshire Council	11.4	7.6	8.4